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KENTUCKY MEDICAL JOURNAL



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JANUARY, 1939

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—IRVING, NEW YORK STATE JOURNAL OF MEDICINE,
JAN. 15, 1938.

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—NEW YORK STATE JOURNAL OF MEDICINE, JAN. 15, 1938

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—HINSHAW, JOURNAL-LANCET, AUGUST 1937.

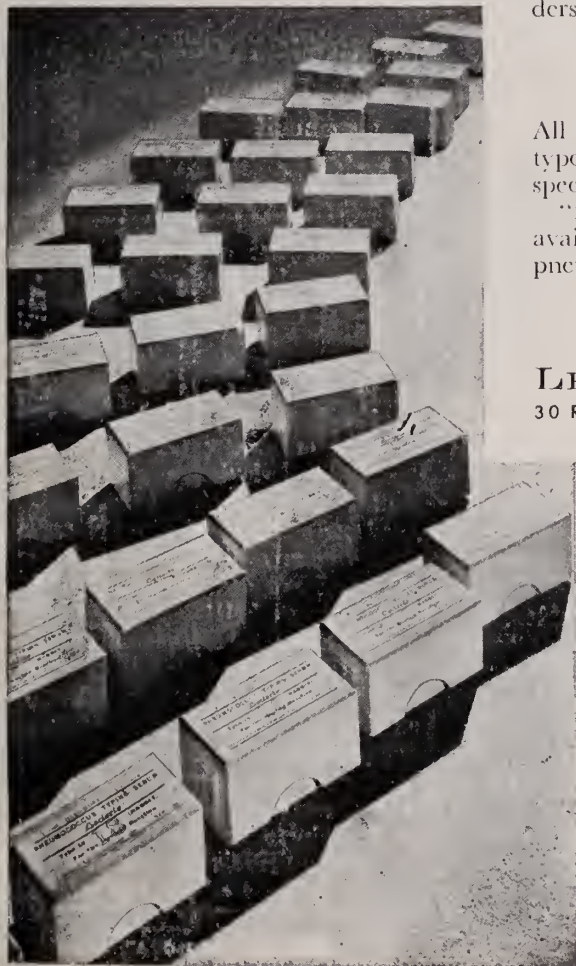
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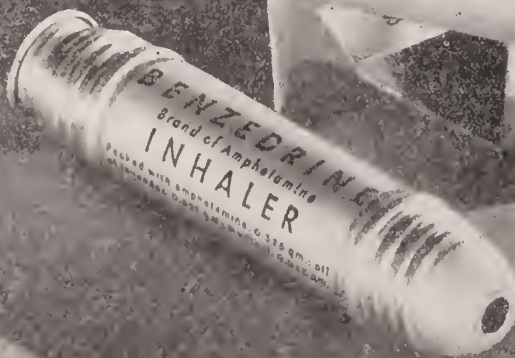
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RECENT ADVANCES IN THE SCIENCE OF NUTRITION

V. Factors Affecting the Vitamin C Contents of Foods

● Recent development of the chemical method for estimation of ascorbic acid (1) has permitted more thorough study of factors determining the vitamin C contents of foods. Circumspectly used, the 2, 6 dichlorophenol-indophenol or "indicator" titration method for vitamin C determination has proven an invaluable tool in this phase of research.

It is now apparent that the vitamin C content of food at the time of consumption is conditioned, first, by the initial ascorbic acid content of the food at the time of harvesting, and second, by the treatment to which the food is subjected between the time of harvesting and the time of consumption.

The initial vitamin C level in raw foods has been found to depend on factors such as variety, maturity and growing conditions (2). Under usual conditions of food crop production, such factors are only partially subject to human control. However, the factors influencing vitamin C in foods from harvesting until consumption are capable of closer regulation by man.

For example, it is known that long storage at improper temperatures adversely affects the initial ascorbic acid contents of foods. Even at refrigeration temperatures raw foods may lose substantial amounts of vitamin C during storage. Rough handling—which causes rupture of vegetable tissue—is also conducive to vitamin C loss especially when followed by improper storage. Certain metals will catalyze vitamin C destruction and even commonly used home-

cooking methods are attended by losses of this essential dietary factor (2).

Briefly, preservation of vitamin C in foods between harvesting and consumption is essentially a problem of preventing or reducing oxidation, either enzymatic or atmospheric. In addition, physical or solution losses must be minimized in preparation of the food for the table. It is pertinent to note that modern commercial canning procedures are well adapted to control both these chemical and physical losses of vitamin C (3).

The use of prime raw stock and quick transport to the cannery after harvesting; rapid inactivation of enzymes through heat treatment; and large scale automatic operations with minimal exposure to air, are basic practices common to all modern canning procedures. All serve to check oxidative losses of the initial ascorbic acid present in raw foods. In addition, during canning, the foods are cooked by the heat process while contained in the sealed can. The liquid within the can, therefore, retains vitamin C which has been removed from the food by solution.

Researches have shown that many commercially canned foods are to be listed among the most valuable contributors of vitamin C to the diet of the American people (2, 3, 4). Such findings demonstrate the effectiveness of modern commercial canning procedures in preservation to the highest practical degree of the initial vitamin C contents of foods.

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(1) 1932. Ztschr. f. Untersuch. d. Lebensmitt. 63, 1.

1933. J. Biol. Chem. 103, 687.

(2) 1938. J. Amer. Med. Assn. 111, 1290.

(3) 1932. Ind. Eng. Chem. 24, 650.

(4) 1938. J. Amer. Med. Assn. 110, 650.

1937. Bull. 19-L Nat'l. Canners Assn., Washington, D. C., 4th Ed.

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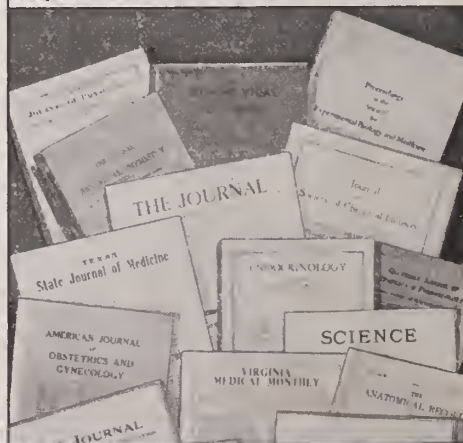
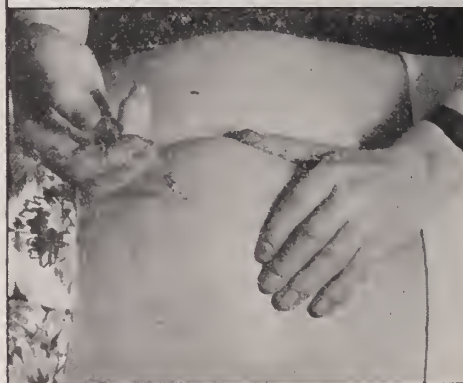
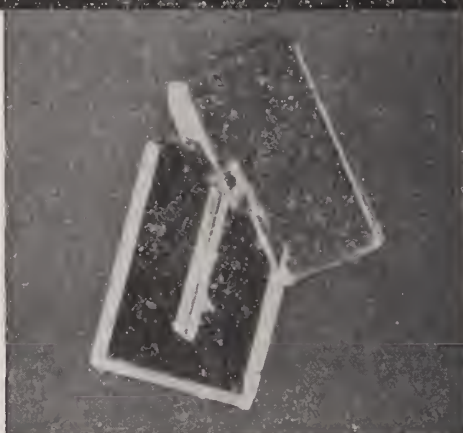
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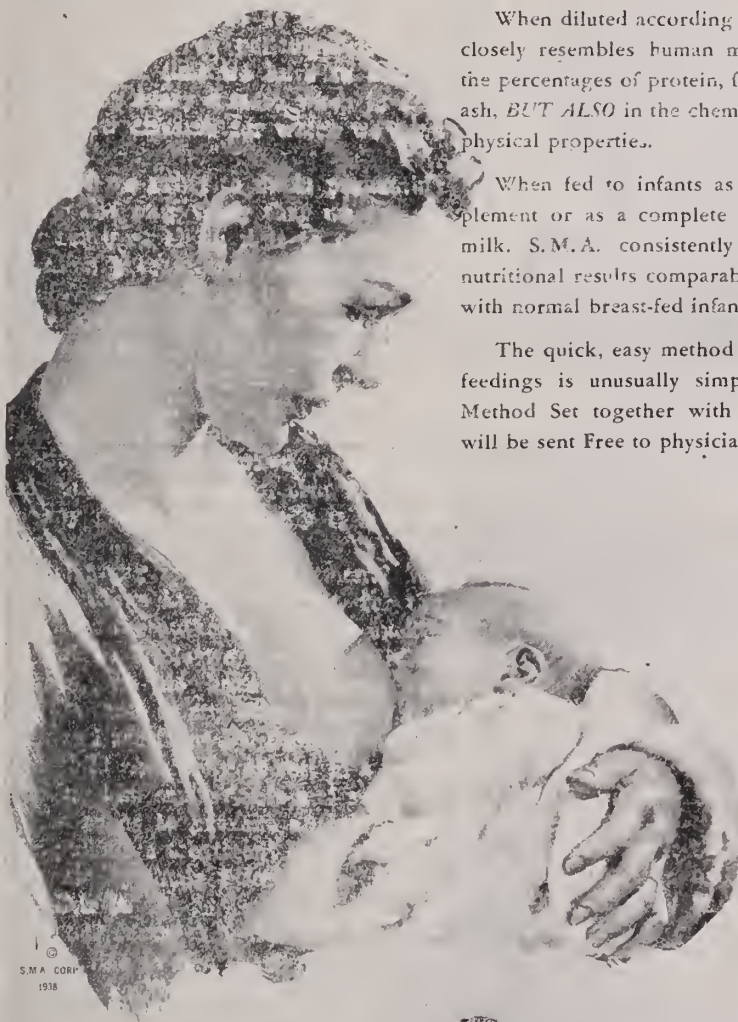
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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Adair	N. A. Mercer	Columbia	January 4
Allen	A. O. Miller	Scottsville	January 25
Anderson	J. B. Lyen	Lawrenceburg	January 2
Ballard	F. H. Russell	Wickliffe	
Barren	Paul S. York	Glasgow	January 18
Bath	H. S. Gilmore	Owingsville	January 9
Bell	E. S. Wilson	Pineville	January 13
Boone	R. E. Ryle	Walton	January 18
Bourbon	S. M. Rickman	Paris	January 19
Boyd	J. E. Moore	Ashland	January 3
Boyle	P. C. Sanders	Danville	January 17
Bracken-Pendleton	W. A. McKenney	Falmouth	January 26
Breathitt	Frank K. Sewell	Jackson	January 17
Breckenridge	J. E. Kincheloe	Hardinsburg	
Bullitt	G. F. Brockman	Shepherdsville	
Butler	G. E. Embry	Morgantown	January 4
Caldwell	W. L. Cash	Princeton	January 3
Calloway	Hugh L. Houston	Murray	January 5
Campbell-Kenton	C. W. Air	Ludlow	January, 5 & 19
Carlisle	E. E. Smith	Bardwell	January 3
Carroll	J. M. Ryan	Carrollton	January 10
Carter	Don E. Wilder	Grayson	January 10
Casey	William J. Sweeney	Liberty	January 26
Christian	Fred T. Harned	Hopkinsville	January 17
Clark	R. E. Strobe	Winchester	January 20
Clay	J. L. Anderson	Manchester	
Clinton	S. F. Stephenson	Albany	January 21
Crittenden	C. G. Moreland	Marion	January 9
Cumberland	W. F. Owsley	Burkesville	January 4
Daviess	Lee Tyler	Owensboro	January 10&24
Elliott			
Estill	Virginia Wallace	Irvine	January 11
Fayette	John Harvey	Lexington	January 10
Fleming	Roy Orsburn	Flemingsburg	January 11
Floyd	J. G. Archer	Prestonsburg	January 25
Franklin	Grace R. Snyder	Frankfort	January 5
Fulton	Russell Rudd	Fulton	January 11
Gallatin	J. M. Stallard	Sparta	January 19
Garrard	J. E. Edwards	Lancaster	January 19
Grant	Paul E. Harper	Dry Ridge	January 18
Graves	H. H. Hunt	Mayfield	January 3
Grayson			
Green	S. J. Simmons	Greensburg	January 2
Greenup	R. L. Compton	Greenup	January 13
Hancock	F. M. Griffin	Hawesville	January 2
Hardin	D. E. McClure	Elizabethtown	January 12
Harlan	C. M. Blanton	Harlan	January 21
Harrison	W. B. Moore	Cynthiana	January 2
Hart	S. F. Richardson	Munfordville	January 3
Henderson	Walter O'Nan	Henderson	January 9&23
Henry	Owen Carroll	New Castle	January 30
Hickman	B. E. Russell	Clinton	January 5
Hopkins	David L. Salmon	Madisonville	January 5
Jackson			January 7
Jefferson	Arthur T. Hurst	Louisville	January 2&16
Jessamine	J. A. VanArsdall	Nicholasville	January 19
Johnson	P. B. Hall	Paintsville	January 14
Knott	M. F. Kelley	Hindman	January 28
Knox	T. R. Davies	Barbourville	January 27
Larue			
Laurel	Oscar D. Brock	London	January 11
Lawrence	L. S. Hayes	Louisa	January 16
Lee	W. D. McCollum	Beattyville	January 14
Leslie			
Letcher	R. Dow Collins	Whitesburg	January 31
Lewis	C. P. Pennington	Vanceburg	January 16
Lincoln	Lewis J. Jones	Hustonville	January 20
Livingston	J. E. Dunn	Smithland	
Logan	Walter Bryne, Jr.	Russellville	
Lyon	H. H. Woodson	Eddyville	January 3
McCracken	Leon Higdon	Faducah	January 25
McCreary	R. M. Smith	Stearns	January 2
McLean			January 12
Madison	H. C. Blanton	Richmond	January 19
Marion	S. C. Clarkson	Lebanon	January 24
Marshall	S. L. Henson	Benton	January 16
Mason	O. M. Goodloe	Maysville	January 11

COUNTY	SECRETARY	RESIDENCE	DATE
Meade	S. H. Stith	Brandenburg	January 26
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	January 10
Metcalfe	E. S. Dunham	Edmonton	
Monroe	George E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mount Sterling	January 10
Morgan			
Muhlenberg	E. L. Gates	Greenville	January 10
Nelson	R. H. Greenwell	Bardstown	
Nicholas	T. P. Scott	Carlisle	January 16
Ohio	Oscar Allen	McHenry	January 4
Oldham	S. J. Smock	LaGrange	January 3
Owen	K. S. McBee	Owenton	January 5
Owsley	John R. Aker	Booneville	January 2
Perry	D. D. Turner	Hazard	January 9
Pike	F. H. Hodges	Pikeville	January 2
Powell	I. W. Johnson	Stanton	January 2
Fulaski	M. C. Spradlin	Somerset	January 12
Robertson			
Rockcastle	Lee Chestnut	Mount Vernon	January 6
Rowan	A. W. Adkins	Morehead	January 9
Russell	J. R. Popplewell	Jamestown	January 9
Scott	Carl M. Gambill	Georgetown	January 5
Shelby	A. D. Doak	Shelbyville	January 19
Simpson	N. O. Witt	Franklin	January 10
Spencer			
Taylor	M. M. Hall	Campbellsville	January 5
Todd	B. E. Boone, Jr.	Elkton	January 4
Trigg	H. L. Wallace	Cadiz	January 25
Trimble			
Union	D. O. Donan	Morganfield	January 25
Warren-Edmonson	Hal Neel	Bowling Green	January 11
Washington	J. H. Hopper	Willisburg	January 18
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	January 27
Whitley	C. A. Moss	Williamsburg	January 5
Wolfe	G. M. Center	Campton	January 2
Woodford	George H. Gregory	Versailles	January 5

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3. **Q.** What is the composition of an acid milk formula for the newborn?
A. *Lactic acid milk, 12 ozs. Boiled water, 8 ozs. Karo Syrup, 2 tablespoons.*

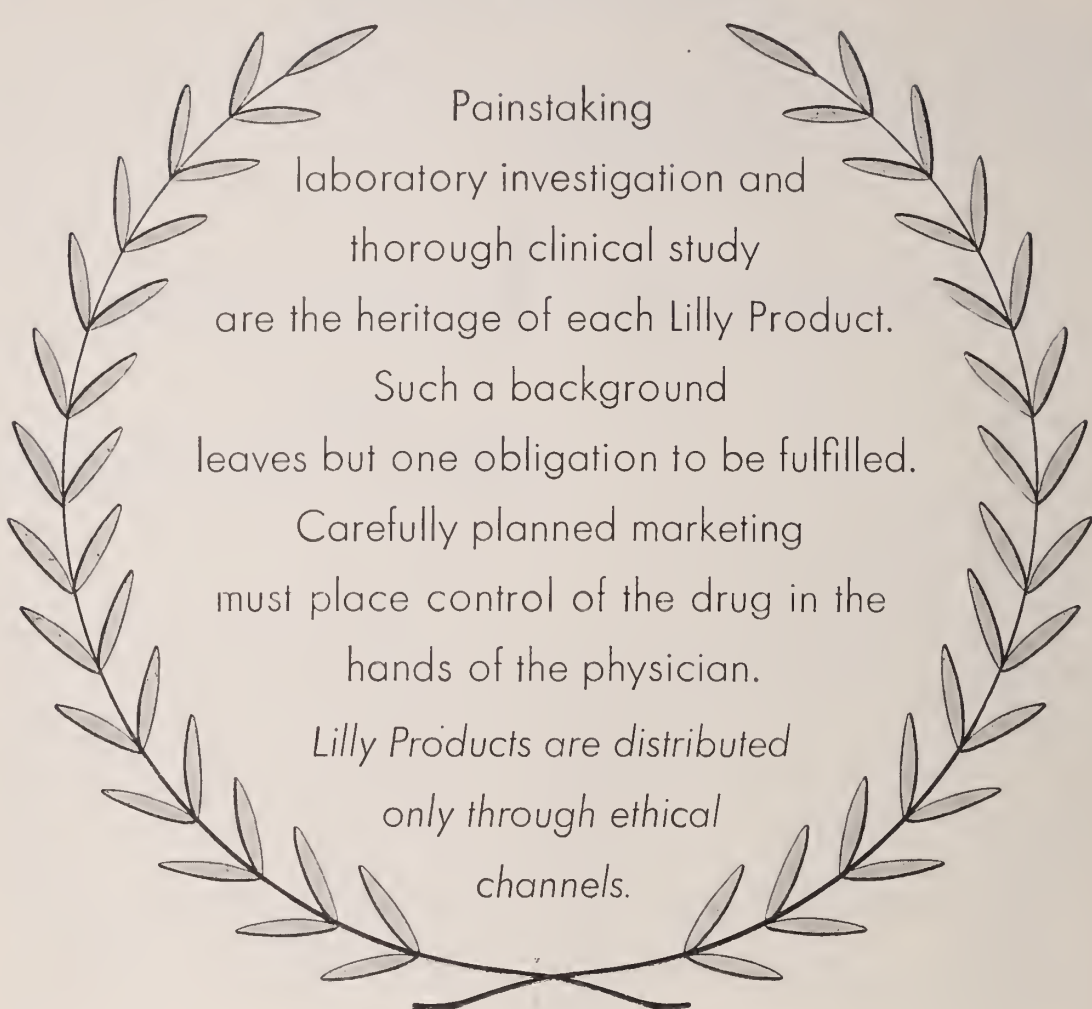
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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 37, No. 1

BOWLING GREEN, KY.

JANUARY, 1939

GAS GANGRENE: GENERAL DISCUSSION AND PRESENT DAY TREATMENT*

J. DUFFY HANCOCK, B. S., M. D.

Louisville.

INTRODUCTION

It is rather generally agreed that there is an increasing incidence of gas bacillus infections. While it is possible that some of this is only apparent and due to improved recognition of the condition most of it is real and can be attributed to the more widespread use of industrial machinery and high speed transportation. A constant and necessary finding in these infections is a preliminary devitalization of tissue. There are many ways in which this trauma may occur. Contused lacerations and compound fractures are the most frequent and most obvious causes. Apparently clean amputations above gangrenous areas resulting from diabetes, arteriosclerosis, or thrombo-angitis obliterans may be followed by this type of infection. Hypodermic administration of medication or subcutaneous infusion of fluid have also been reported as causing a fairly large number of infections in extremities apparently uninvolved previously. Further, it must not be forgotten that the disease may occur primarily in the trunk as a result of a ruptured appendix, criminal abortion, intestinal obstruction and operations on the genitourinary or gastro-intestinal tract.

BACTERIOLOGY

The bacteriology of this disease has appeared to be complicated because of the confusing terms used and the number of organisms that may be involved. If one will remember that "clostridium" is the correct term for an anaerobic or microaerophilic bacillus which forms spores it will be quite clear that *Clostridium Welchii* and the Welch Bacillus are identical.

Of the more than 100 varieties of clostridia only a very few are of interest to the surgeon. One, the tetanus bacillus, does not cause gas gangrene. Of those which do by far the most common and most important is the *Clostridium Welchii* known also as

Bacillus Welchii, *Bacillus perfringens*, and *Bacillus aerogenes capsulatus*. This organism has a most wide-spread distribution, its hardiness and possibility of long survival probably being due to its spore formation. Everyone realizes its presence in soil, excreta, wool, and cartridge wadding. However, the bacillus has been found in meat, milk, water, and normal urine, on the surface of the skin and vaginal mucosa, and has been recovered from the mouths of newborn babies. This clostridium may occur alone in infected cases or in conjunction with others, the more common of which are *Clostridium Oedematis maligni* (bacillus of malignant oedema or Vibron septique), *Clostridium novyi*, and *Clostridium sordelli*. These latter three are characterized more by oedema formation than gas production unless the *Clostridium Welchii* is present. Another interesting organism in the group is the *Clostridium sporogenes* which while not so pathogenic does cause a most putrid odor. Any combination of the above bacilli is quite likely to be accompanied by invasion with the streptococci, staphylococci or other symbiotic aerobes which contribute not only their own virulence but accentuate that of the above mentioned anaerobes by using oxygen which might otherwise have an inhibitory action.

PATHOLOGY

From this consideration it will be understood that the terms "gas edema," "gas phlegmon," and "gas gangrene" are descriptive of various phases of the same disease, depending upon the type of organisms present. The widespread distribution of the Welch bacillus as compared to the low incidence of infections implies, of course, that proper soil is necessary for the development of the disease. So much so is this apparent that some consider the organism a saprophyte requiring devitalized tissue for its activation. When invasion does occur it is the muscle rather than the fascial plane that is involved. However, the subcutaneous connective tissue and the blood vessels may be attacked and thrombosis or rupture of the involved vessels result. The invaded muscle tissue will vary from dull red to gray in color. Much of the glycogen will be fermented with production of carbon dioxide gas. It is this gas that

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causes the bubbles and crepitation. It is thought to be non-toxic and to do its damage mechanically by separating the muscle fibers and constricting them. Some of the change in the color of the muscle may be a cyanosis due to this ischemia rather than to true gangrene.

SYMPTOMS, SIGNS AND DIAGNOSIS

The period of incubation is from one to four days. The usual history in cases where an extremity is involved is that after a crushing or deep laceration either the patient does not rally as expected or shows a relapse in his general condition. He is definitely restless or even irrational. The pain resulting from the gas distention is intense, entirely out of proportion to the evidences of the injury. The pulse shows marked acceleration in contrast to the moderate elevation of temperature which rarely reaches 102°. The flush usually seen in similar infections is replaced by a definite pallor, and there may be evidence of considerable shock. The surrounding tissue near the wound edges is raised, mottled bronze in color, and tympanitic or crepitant. This inflamed area and the distal portion of the extremity are cold rather than hot. Examination of the wound shows a brownish putrid discharge with a characteristic odor described as mouse-like. Gas bubbles may be seen. The discolored muscle will not contract to stimulation nor bleed when incised. Muscles parallel to the invaded one may be very little involved. X-ray examination may show the presence of gas but usually not until after the physical signs are rather evident.

TREATMENT

The first factor in treatment deals with prevention. Contused devitalized muscle should be removed by a thorough debridement stopping only when the muscle bleeds and contracts when cut. The wound should be exposed to its full depth and loosely closed or temporarily left open if there are any pockets present. If packing is used it should never be tight. The same is true of external dressings particularly in cases of compound fractures. Prophylactic serum should be administered, the polyvalent type being the most useful because of the frequent presence of more than one of the clostridia. This polyvalent antitoxin can be secured commercially combined with tetanus antitoxin which is usually also indicated. The combined antitoxin is thought by some to be indicated also, before amputation for diabetic arteriosclerotic gangrene and possibly when rupture of the appendix occurs or intestinal obstruction is suspected. Pre-operative skin prep-

aration should always be thorough, and some surgeons avoid the use of thighs for hypodermoclysis because of the possibility of fecal contamination.

The actual development of the disease calls for most active treatment. Formerly rather prompt amputation was done. The generally accepted surgical procedure now, unless the circulation is hopelessly impaired, is further debridement under general anesthesia, preferably nitrous oxide, and without the use of a tourniquet. Involved muscle should be sacrificed remembering only that the resulting impaired limb will be definitely more satisfactory than none at all. The wound should be left open and soft rubber tubes placed in situ for subsequent irrigations. Dakin's solution, potassium permanganate 1-400, gentian violet in 1 per cent aqueous solution, and zinc peroxide have been recommended. My personal preference is for hydrogen peroxide in half or full strength used as irrigation every hour or two. The therapeutic polyvalent serum should be given in doses of 10,000 to 20,000 units repeated in from six to twenty-four hours until as much as 100,000 units are administered if necessary. However, if improvement is to result it will generally be apparent after several doses. The serum may be given intramuscularly or intravenously. If the latter route is used saline should be administered afterwards to lessen reactions.

The use of X-ray therapy is relatively new but its results are quite brilliant. Small doses which can be delivered by the usual small radiographic machine are given once or twice daily for three or four days. Sulfanilamide seems to have some inhibitory action on gas bacilli and is particularly effective for the control of the symbiotic streptococci which often accentuate the severity of the infection. A suggested dosage for an adult is ninety grains the first day, sixty the second, and thirty the third. Since the toxemia is hemolytic in type transfusions will often be necessary. General supportive treatment and opiates are indicated as in any other painful infection. The importance of good nursing care can not be overemphasized and this is frequently difficult to secure because of unfounded fear of contagion. Usual isolation measures are entirely adequate. If as a last resort or because of destroyed circulation amputation becomes necessary it should be done without the use of a tourniquet and the guillotine type of procedure used, leaving the stump open and unsutured. Oxygen injection into the tissues is mentioned only to be condemned because of the possibility of fatal air embolism. Any wounds or

amputation stumps left unsutured can be subsequently closed after the infection has subsided.

PROGNOSIS

The former mortality of fifty per cent and the dreadful morbidity of frequent amputations has been changed. By the use of the measures above mentioned many limbs can be saved and the mortality kept below twenty per cent. When death does occur it is the result of an overwhelming general toxemia.

CASE REPORT

The following case report will illustrate many of the things mentioned in this paper.

Mrs. J. A., age 45, was seen on July 18, 1938 twenty-four hours after an automobile accident in which she suffered a contusing laceration along the anterior surface of the right forearm curving across the ulnar side of the wrist to the posterior surface of the right hand. Her first aid treatment had consisted in the cleansing of the wound which was then left entirely open after which she was given a prophylactic dose of gas gangrene antitoxin. Twelve hours later the pain became quite severe, she began to feel apprehensive, and the wound developed an extremely foul odor. When I saw her several of the flexor muscles in the forearm were dull gray in color, a few gas bubbles were present in the wound, which was discharging a brownish putrid drainage, very slight crepitation was present up to but not beyond the elbow, and her general appearance was that of an acutely sick woman in great pain. A smear from the wound was positive for the gas bacillus of Welch. A culture subsequently confirmed this finding.

Under general anesthesia a wide debridement was done, small soft rubber tubes were inserted to the depths of the wound and a loose dressing applied. Immediately afterwards a therapeutic dose of 10,000 units of concentrated perfringens antitoxin was given and hourly irrigations of full strength hydrogen peroxide were begun. On the following morning when the wound was dressed marked improvement was observed. Nevertheless she was given two more doses of the serum at 24 hour intervals, X-ray therapy once daily for four days, 125 "r" units at each treatment, and sulfanilamide ninety grains the first day, sixty the second and thirty the third. Transfusion did not seem indicated. While crepitation was not apparent after twelve hours she required morphine for several days to relieve the severe pain.

On July 28, 1938, the eleventh day after her treatment was begun, her general and local condition were satisfactory enough to permit closure of her wound. The skin edges

of the forearm were adequately apposed with the aid of releasing parallel incisions. There had been so much destruction of tissue on the dorsum of the hand that subsequent skin graft will be necessary. While she has definite disability in her hand and wrist the extremity will be infinitely more useful than any artificial limb.

I am not prepared to say which procedures were most effective in this instance but intend to use all of them in any future cases since the result of their combined action was so satisfactory. It should be emphasized again, however, that she also had received a prophylactic dose of the serum promptly after her accident and that this first aid measure was undoubtedly an important factor in her recovery.

CONCLUSIONS

1. Gas gangrene is a serious and increasingly frequent disease.

2. Its prevention rests soundly upon excision of devitalized tissue, avoidance of constricting closure or dressings, and administration of prophylactic polyvalent serum combined with tetanus antitoxin.

3. Marked reduction in mortality and morbidity can be expected if all available measures are used. These include thorough debridement, adequate irrigation with hydrogen peroxide, repeated use of the therapeutic serum in large doses, administration of sulfanilamide and X-ray therapy over a three or four day period, transfusions as indicated, general supportive treatment and nursing care—reserving amputation for uncontrollable extension or hopelessly impaired circulation. While it is difficult to evaluate the merits of each individual procedure there is fortunately no antagonistic action and the patient can be given the supposed benefits of all without anticipating conflicting reactions.

DISCUSSION

Jesshill Love, Louisville: The earliest records of this malignant infection were the observations of Quesnay, 1745, who gave priority to Peyronnie, for the first description of this disease. Quesnay wrote of an "emphysematous gangrene, the erysipelatous color of the skin and the rapidity of death." The rapid progression of traumatic gangrene during the Napoleonic Wars and its gravity as a complication of fracture was cited by Valpeau. Gas gangrene was not mentioned by Ambrose Pare, the Frenchman, the so-called father of surgery in the early 18th century. There were no cases reported during the Civil War between the States. (S. G. & O. Feb., 1932, Wm. Miller, Cincinnati.)

At the beginning of the World War the im-

fection was considered an extremely grave condition. The mortality was rated at 75 per cent unless immediate serum treatment was started. The mortality rate of the American Expeditionary Forces was 48.5 per cent. However, serum therapy given prophylactically appeared to definitely decrease the incidence: and, also render all cases more fit for surgical care. The French advocated continued use of the serum, debridement and continuous drip irrigations of antiseptics for the infection, and high amputation.

The first case reports that combined x-ray therapy and surgery were by James F. Kelly, Professor of Radiology, Omaha, Nebraska, Creighton University Medical School, published in Radiology, January, 1936, in which, he recalled eleven cases that he reported in 1931; eight of the eleven cases received x-ray therapy; in six of the cases only the extremities were involved and all recovered; two cases, the trunk was involved — both died; three of the cases received no x-ray—three patients died; in none of the six cases treated with x-ray was it necessary to amputate the extremity.

An additional series of cases gathered by Kelly from personal communications gave a total of 40 cases.

40 cases,

38 received serum, surgery and x-ray.

40 x-ray or serum and surgery.

34 cases were confined to trunk and extremities.

33 living to date (at time of report.)

4 dead of gas gangrene gave a mortality rate of 10.6 per cent.

3 dead of complications other than gas gangrene.

Kelly's conclusions were that x-ray therapy should be tried in all cases no matter how hopeless they appear. That amputation is definitely detrimental to the welfare of most cases, at least, unnecessary, for the surgery cannot be carried high enough to eradicate the diseased tissue.

Dr. Hancock's case, Mrs. J. A., was treated with x-ray, July 19, 20, 21, 22. She received 125-150-100-100 "r" units respectively; temperature, pulse and respiration was 104-110-30 upon her first visit to the x-ray therapy room. On July 23, T. P. R. was 98-80-22. Technic of therapy was 180 KV; 20 MA; 1-4 cu; 50 cm. distance.

Two of the most accepted theories of radiation are: (1) That there is an ionization of the carbon dioxide and other gases in the tissues, converting them partially into H_2 , O_2 and O_3 thus, inhibiting the growth. (2) That the energy imparted by x-ray converts the toxin of the organism into an anti-toxoid-like substance.

At least, we do know that the organisms actually die in the tissue.

To summarize: A case of suspected gas gangrene should be proven and treated as early as possible. As pointed out by Dr. Hancock, delay is dangerous. The care is purely a surgical procedure—that of drainage, debridement, continuous irrigations and serum therapy and x-ray treatment. Emergency x-ray therapy can be given to these cases at almost any hospital or doctor's office. A mobile x-ray machine or any radiographic outfit can be used. The technic is:

5 inch spark gap.

70-80 KV

5 milliamperes.

15 inch distance.

0.5 mm aluminum filter added.

Dose: 3 minutes, morning and evening for three days over the affected area including a good wide margin below or above the infection.

ECLAMPSIA AND ITS TREATMENT*

B. W. SMOCK, M. D.

Louisville.

The toxemias of pregnancy have produced more tragedy in the human race than probably any other disease, and the most serious type of these toxemias is eclampsia. For years it was nearly one hundred per cent fatal and not until recent years have we been able to cope with it at all.

Due to the time limit I will have to confine my paper to eclampsia alone and pass up the other toxemias which, though milder, are often the forerunner of true eclampsia.

DEFINITION

Eclampsia (to flush or shine out) may be defined as a toxic disease of late pregnancy, characterized by intermittent convulsions, generally clonic, sometimes tonic, which are followed by ever deepening coma with a high mortality rate. Preceding the convulsions, there is a marked hypertension, albuminuria, edema, epigastric pain, visual disturbances, headaches and constipation.

Eclampsia occurs most frequently in the later months of pregnancy, antepartum eclampsia; during labor, intra partum eclampsia; or after delivery, puerperal eclampsia. We now feel that most eclampsia appears before labor and that the stimulation of the convulsive seizures originate uterine contractions, thus inducing labor. It is probably this fact that accounts for the original idea that eclampsia most often occurred during labor.

INCIDENCE

It has been estimated from different hos-

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pital statistics that the toxemia of late pregnancy occurs in about one in five hundred labors; however, taking into consideration the number not treated in hospitals, due to inaccessibility of hospitals, and the milder cases which are not hospitalized, I feel safe in saying that there are two or three pregnant women per one hundred who show some evidence of toxemia. It is interesting to note that this condition is more common among foreign born and Negroes than native Americans. Another interesting observation is that it occurs more frequently in the spring and less frequently in the fall. It is also thought to be more common in cold countries than in warmer climates and shows a heavier incidence in rural sections than cities.

Primiparae are more prone to the toxemias than multiparae, in the ratio of about four to one.

RECURRENCE

It is thought by Williams that a woman who has had eclampsia is less likely to have it in subsequent pregnancies than one who has not. Thus it seems that eclampsia produces a certain relative immunity; however, it does occasionally recur.

MORTALITY AND PROGNOSIS

While the mortality rate has been greatly reduced, it is still entirely too high, ranging from ten to twenty per cent for the mother and twenty to thirty per cent for the infant. This is an unusually high death rate in a condition which, if recognized early and properly treated, should be well below ten per cent.

Cardiac failure, respiratory failure during convulsive seizure, profound toxemias or cerebral apoplexy are the most frequent causes of death.

The prognosis depends almost entirely on the condition of the heart and the severity of the hypertension and albuminuria.

ETIOLOGY

There is hardly a day passes that some obstetrician does not come forward with a new theory as to the cause for this dread malady, but to date there has been none that has stood the test of time or satisfied that group of doctors doing obstetrics. So the cause of the toxemias of late pregnancy remains as much of a mystery as ever. However, there is one fact that stands out from the monograph of H. J. Stander and that is: that the presence of a living fetus and its envelopes, the fetus nearing maturity, are essential factors since no condition comparable to eclampsia has been observed in other than pregnant women. Since this condition rarely occurs in the

early months of pregnancy, there must be some source which produces toxemias with the maturity of the fetus. Further, since it is a fact that a woman carrying a dead fetus does not show eclampsia, it follows that the toxemia must be associated with a living embryo.

PATHOLOGY

Autopsy does not help clear up the causative factor in eclampsia, in fact, it only confuses the picture more in that the liver presents most of the disease changes rather than the renal and vascular system. The most frequent findings are pronounced peripheral necrosis of the liver lobule and some evidence of a glomerulonephrosis of the kidney as well as heart muscle changes and slight to severe brain changes.

SYMPTOMS

Eclampsia presents a symptomatology which varies greatly with the progress of the disease and its severity. However, there are several factors that are always present. They are: Hypertension, albuminuria and edema. The other symptoms which may or may not be present are the eye changes, the changes in the nervous system and the subjective signs such as headache and general malaise, pain in the epigastrium and fatigue.

BLOOD PRESSURE: The outstanding symptom of approaching toxemia is a persistent elevation of the blood pressure of ten or more millimeters. The blood pressure usually increases from time to time until there is an alarming hypertension.

EDEMA: When swelling is present, on arising in the morning and there is edema over the anterior portion of the leg with swelling of the upper portion of the body, face and hands, it is safe to foretell a developing toxemia.

In nearly all cases of eclampsia there is an unusually large gain in body weight well over the twenty-four to thirty pounds considered normal.

ALBUMINURIA: Increases in direct ratio to the climb in hypertension from a faint trace to an almost solid urine upon being boiled. The urinary output in eclampsia is greatly diminished and often in the severe type there is a complete anuria.

EYE SYMPTOMS: Early in the course of a toxemia, there is the complaint of spots or wiggle tails before the eyes and later there may be more serious eye changes, such as detached retina, retinitis which may result in complete blindness.

The symptom complex, however, which produces the most distinctive picture of eclampsia is the extreme mental irritability. This

condition we feel is due either to cerebral irritation or to an edema of the brain and is the background for the convulsions. It is this phase of toxemia to which most attention is given in the treatment. The diagnosis of eclampsia is based entirely upon the findings of hypertension, albuminuria, and edema in a pregnant woman.

The differential diagnosis must be made, however, from epilepsy, hysteria, diabetes, coma, meningitis, brain tumor, and encephalitis. This should not offer any difficulty if the three cardinal signs of eclampsia are found.

TREATMENT

The treatment of eclampsia or probably better named the management of toxemia is one of the crowning accomplishments of present day medicine and one that all of us can be justly proud of because it is one that has been participated in by all of us doing a general practice.

The management or treatment of eclampsia begins at the time of the first prenatal visit when the expectant mother is instructed as to the importance of her monthly visit to her doctor for the first six months and then twice a month for the last three months. The blood pressure and urine are both given attention at these visits, and thus the first step in the treatment is administered—prophylaxis. The next consideration is then the early toxemia or pre-eclampsia which should be treated actively symptomatically. Put to bed, diet corrected for albuminuria, elimination, and sedatives for hypertension with quiet and pleasant surroundings and if there is no responses and the condition progresses, it then is necessary to resort to all of the resources of medicine.

At this stage the treatment is based on the following essentials:

1. Absolute quiet.
2. Sedation.
3. Control of the convulsions.
4. Maintenance of the circulation.
5. Elimination.
6. Reduction of the blood pressure.
7. Emptying of the uterus.

The nervous irritability of an eclampsia patient is most pronounced and any procedure which exaggerates this state is most injurious. It is best to have the patient in a partially darkened room with a quiet unexcitable attendant (a hospital and trained nurse is preferable if available). Regarding the use of sedatives at present I think the profession leans to the use of the phenobarbitals intravenously rather than morphine

due to the fact that morphine retards free eliminations. Sodium amytal grain 7 1-2 intravenously every two to three hours until patient is quiet and convulsions controlled has proven very satisfactory in my hands. With this, I have used fifteen cc. of a 10 per cent magnesium sulphate solution both intravenously or intramuscularly at intervals of about two to three hours. Alternating hours with the sodium amytal until patient is controlled. The magnesium sulphate helps control the convulsions as well as acting as a diuretic.

After the patient is well under the effects of the sedatives it is then advisable to wash out the stomach with four or five washings until the fluid returns clear and then instill castor oil or magnesium sulphate solution. Some men then resort to rather heavy and prolonged colonic irrigations, however, I feel that a stimulating enema is sufficient and it may be repeated in a few hours if necessary. The circulation must be watched and supported as indicated with Digitalis. The elimination will be well cared for by the magnesium sulphate intravenously and intramuscularly together with the instilled salts or castor oil. I do not feel that the hot packs for skin elimination are an advantage in that there is entirely too much handling of the patient.

At this time, there should be administered a glucose solution intravenously, either 50 c.c. of a fifty per cent solution or five hundred c.c. of a ten per cent solution. This increases the carbohydrates reserve, acts as diuretic and helps reduce the cerebral edema and lower the blood pressure. If there is evidence of a profound cerebral edema it is advisable to make a spinal puncture and withdraw from twenty to forty c.c. of spinal fluid. This should be repeated if pressure indicates at two to three hour intervals.

As soon as convulsions are controlled and there is evidence of lessening of toxemia, emptying of the uterus should be accomplished. If the patient is a primipara and labor has not started and there is no effacing of the cervix it is best to attempt Caesarian section. Using only local anesthesia or cyclopropane, never chloroform or ether because of their bad effect upon the kidney. If the patient is a multipara and cervix is soft and effacing or primipara well along in labor with softening of the cervix, it is well to use a bag or manual induction of labor, with delivery by version, if necessary. There is usually an immediate change for the better as soon as the uterus is emptied and the baby stands a better chance to live. There is a

very toxic condition of the placenta in this toxemia and the longer the baby remains in the uterus the less chance there is for a living child.

The after care of the eclampsia requires a great deal of observation and study both as to drugs and dietetics and should be continued for one year at least afterward.

CONCLUSION

In conclusion, I feel that we have made a decided move forward in the handling of the toxemias of late pregnancy, due first to the more universal practice of pre-natal care, second to the more general use of the sphygmomanometer; third, to the advent of phenobarbital, magnesia sulphate and glucose therapy, and lastly by the improvement in the technique of Caesarian section. With a still more general practice of prenatal care and the hope of a better knowledge of the etiology in the near future, I am sure that a brighter day is dawning and the mortality rate of this dread condition will be reduced in the future.

PRESENT DAY TREATMENT OF PEPTIC ULCER*

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There is at present no entirely satisfactory explanation of the etiology of peptic ulcer. We have had suggested that they are due to focal infection; malnutrition and Vitamine C deficiency has also been mentioned. For many years the use of condiments, tobacco and alcohol has been blamed. Food allergy causing a rather constant pyloro-spasm could well be a predisposing factor. But in as much as there is so often a history of peptic ulcer in the family and the patient is so often a serious, worrying, nervous sort of individual, it may be reasonably said that there is first, a hereditary neuropathic factor carried along by, second, one of the above mentioned conditions. At any rate, it is generally accepted that: peptic ulcers usually begin in the young adult period of life, they occur more often in the male than in the female. In males the duodeno-pyloric area is the usual site and gastric ulcers occur proportionally more often in the female.

Peptic ulcers should be always treated medically until it appears that medical treatment has absolutely failed. The accepted indications for surgery are: 1. Perforation; 2. those having serious and repeated hemorrhages; 3. those where there is a possibility of malignancy; 4. those with a pyloric obstruction which does not respond to medical

treatment in two weeks time; 5. those with constant recurrence of symptoms despite three or four standard medical treatments in as many years. Regardless of what type of treatment is used a cure should not be positively promised as 46 per cent medically treated cases recur within 5 years and 48 per cent of surgically treated cases recur within 5 years.

The treatment regime should be considered as follows:

(a) **REST:** Some form of increase in the amount of general physical rest must be employed. If the case is at all severe or if the patient can possibly afford to, he should go to bed. If bed rest can not be arranged perhaps working hours can be shortened, or an afternoon nap be instituted or if nothing else can be done, keep the patient resting every bit of his non-working time.

Consider nervous temperament in planning this because if children, in-laws or other household things make the patient nervous harm may be done instead of good. If so, use the hospital.

(b) **DIET:** The diet, principally, is simply to give relatively small, frequent feedings of a bland type of food which does not stimulate gastric secretion or require long gastric digestion. All condiments, spices, fresh fruits, most fresh vegetables, soft carbonated drinks, and hard drinks should be eliminated.

A Sippy diet is needlessly severe in the majority of cases but should be used in cases where there is: 1. bleeding, 2. pyloric obstruction of great degree, 3. post-operatively, 4. to discipline careless or uncooperative patients. The average case can be treated successfully with three moderately small meals a day such as: breakfast—cereal, soft egg and toast; lunch—potato, baked or mashed, cottage cheese, toast. Supper—boiled rice, creamed soups, custard, gelatin, etc. Rich milk and crackers between meals.

In fourteen days add pureed vegetables, stewed or canned fruits and in another fourteen days small portions of red meat, slightly rare. Opportunity should be taken to try to educate the patient to permanently give up the use of pepper, ketchup, mustard, sauces and the like.

Smoking should be definitely regulated. Allow smoking only when food is in the stomach as tobacco very definitely stimulates empty stomach secretion. A limit of ten cigarettes a day will some times result in a complete discontinuation of the habit after a few days.

Alcoholic drinks are of course discontinued during treatment but once cure or arrest is accomplished a well diluted whiskey highball seems to do no harm when taken a short

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time before eating. Mixed drinks, especially those containing gin are trouble makers as well as soda pops, ginger-ale, and ice tea.

(c) **ANTI-ACID MEDICATION:** Regardless of original cause of ulcer the digestant corrosive action of hydrochloric acid and gastric secretions enlarge the ulcer, cause pain and must be neutralized to secure healing. This is done by so-called alkalis—soda bicarbonate or calcined magnesia the original agents, but continued use of such things was long suspected harmful causing alkalosis or malnutrition.

A few years ago a committee was formed in Gastro-Enterological division of The American Medical Association to study anti-acid medication and it was decided that the ideal should be bland, be insoluble, not disturb acid base ratio of blood plasma, not alkalize urine—danger of crystalline phosphate stones, not cause diarrhoea or constipation.

Therefore after study, Aluminum Silicate or Kaolin, a bulky powder without odor or real taste was selected, it had hitherto been occasionally employed as a buffer in cases of metallic acid poisoning and in the Orient had been used in cases of Asiatic cholera for hundreds of years.

Magnesium trisilicate and Aluminum hydroxide are slightly different chemically but all are insoluble, are almost chemically inert yet they blot up or absorb quantities of hydrochloric acid that would require much soda to neutralize. All can be given over periods of time causing (1) alkalosis, (2) damaging the kidneys or (3) paralyzing the digestion.

In the short time that this type of preparation has been recognized most of the drug companies have placed on the market their own particular product. I counted twelve different ones in a down town drug store recently as follows: Alomin, Kaomin, Trimax, Sitrimin, Ludozan, Trisomin, Kaomagma, Amphogel, Bismuth-Kaolin, Vikalum, Magnesium Tri-Silicate, Tri-Silae, Tri-Ulmen.

(d) **ANTI-SPASMODICS:** Pylorospasm should be relieved, its presence helps constitute a vicious circle, therefore anti-spasmodics definitely are indicated. The original standby is of course Belladonna or its alkaloid atropine. Many physicians would give very nervous patients some luminal in addition to Belladonna and it seemed to work well—actually enhancing the effect of the Belladonna as well as producing a quieter patient, so that the use of this combination has now become quite a common practice. The drug companies immediately came forth with convenient and useful preparations. We have Barbidonna and Donnatal containing alkaloids of Atropine, Hyoscine, Scopolamine and one fourth grain Luminal, also Sulphotone

containing Atropine, one tablet is given three or four times a day.

(e) **ACCESSORY MEDICATION:** Histidin Hydrochloride—is an amino acid, one of those produced in the duodenum, the production of which is thought limited in ulcers of the pylorus or duodenum. One uses a 4 per cent aqueous solution, 5 c.c. at each injection. It seems to lessen pain, stimulate nutrition and healing. Beekman's summary indicates it a useful adjunct. Upham says it is nothing but psychotherapy, that water does just as much good. An injection of histidin may be given daily or every other day for from ten to twenty doses.

Synodol—another injectable treatment material is made by Winthrop Drug Company. It is called Synodol and is described as being a compound solution of non-specific proteins, lipoids and animal fats with one grain of emetine. It is supposed to arrest gastric and intestinal hypermotility and decrease gastric hyperacidity. It is prepared in 6 c.c. ampoules, is given intravenously from three to six days apart. The course varies from five to ten injections. This also seems a useful preparation.

Use of Vitamine C.—A great many people with peptic ulcer find that orange juice and tomato juice give them indigestion and even precipitate real ulcer pain, with the result that a certain number of these people never touch any citrus fruit juice. I have encountered three such instances in the past year whose general sense of well being was tremendously improved after taking Cevitamie Acid tablets three or four daily for ten days. The routine use of vitamine C might be worth while.

(f) **PSYCHOTHERAPY:** There is the nervous or psychic factor in most cases of peptic ulcer and this angle must not be neglected. The physician should explain the worry factor and attempt to find out what are the particular worries of the patient. Of course it does no good merely to tell some one not to worry, but if explained how often worry is a contributing cause and how important it is to dispose of or shift anxiety, we often can accomplish a great deal. Some times it is a worry over cancer and we can explain that away, some times it is business and we can get some older friend to help with counsel and advice, sometimes it is a marital maladjustment that can be patched up, or an unsuitable occupation that can be changed.

I have known young married men who would have recurrence of ulcer symptoms when their wives were going into the final months of pregnancy. I have known a girl develop an ulcer nursing her mother through

a menopause melancholia. I have known a man with business worries and a worthless son develop a large ulcer with considerable pyloric obstruction. This case was showing poor response to treatment when the flood came along—business worries ceased, he and his son were working together on a boat with harmony and mutual respect. A shot of typhoid vaccine and a diet of hamburgers and whiskey seemed to be splendid treatment and when X-rays were again available all evidence of ulcer had disappeared.

These and many other experiences together, with the reported success of so many different sorts of treatment makes me feel that the mental angle is so important that the physician has not done his full duty until he has tried to solve this phase.

ACUTE INFECTION OF THE MIDDLE EAR*

J. F. DUNN, M. D.

Arlington.

The middle ear is situated in the petrous portion of the temporal bone and lying in close proximity to it are the lateral sinus, the mastoid antrum, the mastoid cells and the labyrinth. Then, realizing the fact that any one or more of these adjacent structures may, at any time during an attack of Otitis Media, become involved, and also realizing that it is often impossible to establish a "deadline" between these structures, and furthermore, realizing that oftentimes the seemingly mild cases may suddenly prove serious and go beyond medical or surgical aid, is it any wonder that medical men and even specialists, differ widely in their views as to what to do and when to do it?

I believe by far the most important thing in the whole story is early recognition with proper treatment.

Unfortunately, the laity do not consider the gravity of ear ache, unless the pain is so severe that it breaks the family rest over too long a period or the ear ceases to discharge soon enough. Then it is that the physician is consulted, and in many instances the infection has gone beyond the middle ear. So, I want to urge the health officers as they visit the various homes and schools to impress upon the minds of our citizens the importance of ear ache and the necessity of seeing their physicians at once.

We have two extremes as the laity come to our office. There are those that come in for the first time with a well defined case of

Mastoiditis, while others come with their own diagnosis of Mastoiditis, because they have a sore spot somewhere between the scapula and the Frontal sinus with no ear trouble whatever. It is the first class that we need to round up.

What is the cause of an acute Otitis Media? Infection. How does this infection gain entrance to the middle ear? There are only two sources from which it may arise, viz:

1. Through the external auditory canal by means of a foreign body accidentally penetrating the drum membrane, thereby carrying with it the products of infection into the middle ear, or by some infectious material being carried from the auditory canal through an unhealed opening in the drum as in latent case of chronic otitis media, thereby causing an acute exacerbation.

2. By infections from the naso-pharynx traveling up the eustachian tube to the middle ear. This is by far the most common cause of middle ear infection.

Children are far more susceptible to middle ear infection than are adults, due to the fact that they necessarily have to encounter all the infectious diseases that affect the respiratory tract such as measles, scarlet fever, diphtheria, tonsillitis, pertussis and common colds, etc. Adenoids are also a common predisposing factor. The middle ear being composed of the same kind of embryonal cells as the naso-pharynx, it affords a suitable soil for bacteria, and furthermore, the eustachian tube is short and less patulous than in adults, affording an easy egress for bacteria to enter the middle ear.

Now, let us consider for a few moments what happens when you have an acute middle ear infection. First, there is an infection somewhere in the naso-pharynx which travels up the eustachian tube, and this infection causes an inflammation of the tube and consequently a swelling of same which closes the distal end of the tube. Then, the endothelium of the middle ear becomes infected and a serous exudate is thrown out into the tympanic cavity. The closure of the eustachian tube prevents air from going into the middle ear and upsets the equilibrium of the ear; this accounts for the deafness and the dizziness which accompanies this condition, and it also accounts for the pain as the serum cannot escape into the throat, therefore, as the serum increases in quantity, the pain becomes greater and soon there is a bulging of the ear-drum. This serum resolves itself into pus or muco-pus which often contains some blood. There is also, as a rule, restlessness and fever. Now, this fluid in the tympanic cavity is compelled to escape before relief

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may be obtained and naturally it will travel in the direction of least resistance. There are two natural exits by which the pus may escape which we hail with joy and which, in a large percentage of cases, allow the storm to pass and peace to be restored. These are, first, by spontaneous rupture of the tympanic membrane which affords an early exit to the surface. And, second, by escaping through the eustachian tube into the pharynx. When the pus cannot escape through these two natural channels, it will work its way through the thin bony plates surrounding the middle ear cavity into the adjacent structures which we have already mentioned.

Bear in mind that the mere escape of pus does not always relieve the situation, as we are dealing with a pyogenic infection due to the streptococcus, which may or may not be of the haemolytic variety. Also the staphylococcus and the pneumococcus and oftentimes a mixture of several strains of cocci.

Therefore, this infection may, even after adequate drainage has been established, continue on by continuity and extend through to the mastoid cells, the lateral sinus and the labyrinth to the brain, the inevitable result of which you already know.

Pus in the tympanic cavity usually demonstrates itself by pressure on the drum. The inner lining of the tympanic membrane or ear drum is the lining of the middle ear, therefore, the pathology shown on the ear drum is the pathology of the middle ear, so we do not have to sit around and wonder what is going on in the middle ear because we can take a look at the drum membrane and see all the pathology there is in the middle ear.

In the commencement of this condition there is an injection of the drum membrane and it begins to lose its bright and shining luster; then a little later we have a more advanced inflammation in which the drum becomes fiery red, and finally, the accumulation of serum in the middle ear which is determined by a bulging of the drum.

DIAGNOSIS

As a rule the diagnosis is very easy in a simple case of otitis media, but the problem that often baffles even the best of specialists is, just when a complication begins to arise; the most common of which is mastoiditis. According to my teaching, the haemolytic variety is the most treacherous type from the beginning throughout the case. The pneumococcus type is very deceptive as it generally runs a mild course for some time, then suddenly shows grave symptoms; so, it is a good idea to have a microscopic examination of the pus as soon as possible and determine the type of micro-organisms we are dealing

with. A leucocyte count should be made from time to time especially in adults as the severity of the case may often be determined by the height of the leucocyte count. It is not so dependable in children.

Mistaken diagnosis often occurs in infants, for the child has no way of notifying you that his ear aches. Many times we have been called to see a child which showed no symptoms except that it cried and had fever, and in our rush we would perhaps give a laxative and cocoa-quinine, thinking we were dealing with some disorder of digestion, malaria, etc.,—then, a few days later the mother tells us that the baby's ear is "running." We should, therefore, carry our headmirror or auroscope with us at all times and examine the ears of all children regardless of their symptoms, and oftentimes we will find that to be the seat of the trouble.

In adults the diagnosis is, as a rule, easy as they can tell you they have the earache and loss of hearing in the affected ear. However, all affected ears do not ache. It is possible to have a bulging drum with no pain in the ear, but this is rare. Just here I want to mention a condition that might lead us to believe that we have a middle ear infection when there is none present, as in a few cases that came under my observation last winter; in fact, I had it myself. The patient would complain of deafness, a ringing in the affected ear, and also a fullness in the ear with no pain. On examination of the ear drum everything was normal and the trouble was found to be only a slight inflammation at the pharyngeal end of the eustachian tube which closed the tube but no infection traveled up to the middle ear. This condition would clear up in a few days even without treatment.

The diagnosis and course of the disease can be determined only by an inspection of the ear drum in conjunction with the other clinical symptoms which we have already mentioned, but the thing that worries us most, as I have already said, is the complications, especially mastoiditis, as we cannot often tell just when it begins nor how severe it is and here is where the arguments arise among the specialists as to the time for operation on the mastoid.

I shall not take up your time discussing thrombosis of the lateral sinus or the labyrinth complication with meningitis as these complications are rare and when they arise it is practically too late to do the patient any good, but we will notice for a few minutes the diagnosis of mastoiditis. This follows a middle ear infection as we have already stated and is marked by a tenderness over the mastoid process and some swelling

and there is oedema over and around the mastoid; then looking into the auditory canal, there is usually a sagging of the mucous membrane from the upper wall. These symptoms are also attended by fever, discharging ear, pain and restlessness, and sometimes delirium. Some specialists advocate the theory that all ears that drain longer than forty-eight hours have mastoid complications and should be operated, while others seriously doubt this statement and believe that a middle ear can drain for days without a mastoid complication. Another valuable aid in diagnosing a mastoid involvement is the x-ray. Where there is pus in the mastoid cells, the picture shows an obliteration of the cluster of air cells which are present in a normal condition.

TREATMENT

There are four aims to be attained when we have made a diagnosis of acute middle ear infection, viz:

1. Relief of pain.
2. To prevent complications.
3. To prevent a chronic discharging ear with foul odor and loss of hearing.
4. To save life.

Of course prophylaxis is best in all cases. So, in order to effect this purpose all irritations of the naso-pharynx should receive prompt treatment. The throat should be swabbed with some antiseptic, the most efficient of which, in my estimation, is Tinct. of Merthiolate, and Argyrol, or some of the other silver preparations, should be instilled into the nose often, and most especially should this preventive treatment be carried out when we are dealing with some of the exanthems, realizing how prone the infection in these conditions is to attack the middle ear.

Now, as to the treatment of the attack, the symptom that stands out most prominently from the standpoint of the patient is pain, which in the majority of cases is excruciating. He is not worrying over what might happen to his mastoid or lateral sinus, or who will be elected senator this Fall, but what he wants is ease, and he wants it now. For this purpose, a 10 per cent Phenol and Glycerin solution is used extensively by many of our leading otologists, but personally, I feel that the mixture is entirely too strong with carbolic acid and will to some extent cause an excoriation of the mucous membrane which lines the auditory canal and outer surface of the drum, thereby changing the appearance of the drum which is our lighthouse. I prefer a 2 per cent solution, which should be warmed and dropped into the ear every 3 or 4 hours, filling the

ear canal and allowing it to remain in the ear. A hot water bottle to the affected ear is also beneficial. Do not instill mercurochrome, nor any other colors or dyes for they are not only no good but they discolor the mucous membrane, thereby doing away with our guideposts as to the progress of the disease. Opiates may be used as needed as the pain is no guide as to the progress of the case. The antiseptics should be continued in the nose and throat throughout the attack.

The most important thing to be done toward shortening the attack, prevention of complications, and to give relief from pain is early and free incision of the drum. This can be done in adults with practically no pain under a local anesthetic, using phenol, cocaine and menthol crystals equal parts instilled onto the drum with a swab. But with children a general anesthetic is necessary, the choice of which is Ethyl Chloride.

It is a serious mistake to wait for spontaneous rupture of the drum as serious damage may be done to the surrounding structures before this happens. And furthermore, the sooner drainage is established the sooner the ear will return to normalcy, and the more certain the ear drum is to close up.

Just a few words in closing as to the treatment after drainage is established. The patient should lie on the affected ear, which favors drainage. One of the main points at this time is to keep the ear canal clean at all times. This can best be done by a nurse, but in a majority of cases they are not able to pay for the service of a nurse or hospital fee. So, it is up to the family to care for the ear and the physician should teach the family how to accomplish this. In their hands, I prefer a medicine dropper instead of an ear syringe as they might use too much force and push some pus that may be contaminated in the auditory canal back into the middle ear. And, while the treatment is being applied the patient should lie on the sound ear and several droppersful of a hot boric acid solution or a weak bichloride solution should be dropped into the ear, and, following this, the ear should be mopped with small pledges of cotton on an applicator; after which the ear canal should be filled with Tinct. of Merthiolate and allowed to remain in the ear. The auricle should also be painted with Merthiolate in order to prevent the escaping pus from irritating. The patient should be seen at least once each day by the physician. The temperature should be recorded from time to time as this is a guide as to the progress of the case. A rise of temperature with pain in the ear and a lessening of the discharge denotes that the drum is closing or

has become blocked so that the drainage is not sufficient and it may be that a mastoid complication is arising. Occasionally it is necessary at this time to open the drum again.

The general nutrition should be looked after as necessary, and in children it is well after the attack has subsided to remove their tonsils and adenoids, which in many cases will prevent a recurrence.

DETACHED RETINA*

C. DWIGHT TOWNES, M. D.

Louisville.

The retina, constituting the inner tunic of the eyeball lining the concavity of the posterior three-fifths of the globe, is a thin transparent membrane not more than 1 mm. thick in its thickest portion at the nasal margin of the optic disc, and only 1-10 mm. thick at its anterior extremity. It is intimately attached posteriorly where the fibers of the retina converge to form the optic disc, and anteriorly at the ora serrata, where it is transformed into the non-pigmented epithelium overlying the ciliary body. Between these points it is only loosely connected with the choroid by the pigment processes passing between the rods and cones. This simple contact is maintained normally by the intraocular hydrostatic pressure.

This membrane may become detached through various anatomico-pathologic circumstances. If the detachment occurs in the course of certain lesions, such as tumor of the choroid, intraocular parasite, exudative choroiditis, it is called "secondary detachment of the retina." If it occurs spontaneously, i. e. without any of the above causes it is known as "primary" or "idiopathic detachment." In these instances the detachment itself is the predominating feature of the clinical picture, masking the underlying disease processes which predisposed the eye to detachment of the retina. These processes are not well understood and cause few symptoms of diagnostic value, nevertheless they exist and pave the way for the detachment. Therefore detachment of the retina, whether primary or secondary, is a symptom, not a disease.

When detachment occurs the separation takes place along the cleavage plane between the pigment layer and the layer of rods and cones, according to the embryologic development of the primary optic vesicle and optic cup. The layer of rods and cones pulls away,

leaving the pigment layer attached to the choroid.

The etiology of detached retina is not always clear, but often confused and not easily determined because the predisposing factors may be combined. Outstanding among the factors which prepare the way for detachment of the retina are myopia, trauma, vitreous degeneration, choriorretinitis of low degree, and senile degenerative changes in the retina. Isolated or associated together, these play a part in almost all cases of separation of the retina.

There has been a tendency to consider the pathogenesis of this condition according to four main theories:

(1) Distention theory of Von Graefe. In myopia the retina and outer coats of the eyeball are stretched. If a cystic degeneration or other disease of the retina be present the continuity of that membrane may be dissolved, thus permitting detachment to take place. Also sudden distention may be brought about by trauma.

(2) Traction theory of Leber, postulated because in many cases the vitreous was found to contain many fibrous strands which were adherent to the retina, especially between the ora serrata and the equator, where tears were found most frequently. Leber attributed these tears to direct pull on the retina by the adherent strands. Reduction of intraocular tension by disease or trauma also was cited as a factor.

If predisposition to retinal detachment is present in the form of a retinal disease or degenerative changes in the vitreous, a very slight injury may produce detachment. Even a rapid rotation of the eye may cause a tear and a detachment in an eye which previously was not known to be diseased. Thus may be seen the complex nature of the problem of traumatic detachment and the serious responsibility of accident insurance companies.

(3) Depression theory, in which the conditions are just the reverse of those described in the distention theory. Hypotony, or low tension diminishes the normal intraocular hydrostatic pressure and provokes detachment of the retina.

(4) Theory of Exudation, which considers serous choroiditis as the most important cause of detachment, such as is seen in nephritis, toxemia of pregnancy, orbital cellulitis, tenonitis, or scleritis.

Vogt has examined histologically a case in which the detachment of the retina was only a few weeks old. There was no evidence whatever of inflammation, scar formation, vitreous strands, retinal hemorrhage, or hole in the retina as a cause of the spontaneous sep-

*Read before the Kentucky State Medical Association, Louisville, October 30, 1938.

aration. However in the majority of instances, probably as high as 90 per cent, a hole or tear in the retina will be found. Practically all ophthalmologists are in agreement that the retinal hole plays a role of primary importance. It is possible for a detachment to occur without a retinal hole but the suspicion is always present that there may be a hole that is hidden in the folds of the separated retina.

Holes may be of several types:

(1) Small round holes, usually caused by cystic degeneration or small inflammatory lesions, often multiple, and found in the lower part of the retina.

(2) V-shaped or Y-shaped tears, caused by traction of a vitreous strand, usually located in the upper periphery.

(3) Disinsertion of the retina, or retinodialysis, in which it is pulled away from its insertion at the ora serrata. These may be multiple or single and usually are located temporally or nasally.

The mechanism by which detachment takes place is as follows: A retinal hole develops; the degenerated, liquified vitreous flows through the hole and peels the retina away along the line of cleavage between the pigment epithelium and the layer of rods and cones. Recent detachments often occur in the upper part of the eyeball, and may remain localized there temporarily. However older detachments are usually located in the lower part and may remain almost unchanged for a long time. This change in location, the descent from upper to lower part of the eye is a common and logical one. Occasionally the upper retina may apparently be replaced and the original hole under such conditions is difficult to recognize.

The onset of detached retina is usually sudden and without pain, manifested subjectively by more or less disturbance of vision. The patient often says a curtain seems to be drawn before his eyes so that only part of an object is seen. This curtain progressively extends toward the center. Or there may be general fogginess or blur which prevents distinct vision. So long as the detachment remains in the periphery, central visual acuity may be retained but as the macular region becomes involved the patient may complain of metamorphopsia or distorted images and still later central vision is seriously impaired. There is progressive loss of visual field and ultimately the retina becomes detached except at the papilla and at the ora serrata, and the eye becomes completely blind.

Usually there are no external signs by which detachment of the retina may be recognized. The diagnosis is made with the ophthalmoscope. A plane mirror will show a characteristic change in the type of fundus

reflex. The typical red color of the pupillary reflex is changed to a dull gray by the elevated retina. The retina appears as a gray veil thrown into folds and creases with dark tortuous blood vessels coursing over it. Pains-taking search, on repeated examinations and with the patient in different positions, must be made to discover retinal tears. Perimetric field studies will reveal defects corresponding to the areas involved in the detachment. Transillumination of the globe will show a bright pupillary reflex.

The prognosis of primary detachment of the retina is bad. It would be practically hopeless if it were not for recent development of a surgical treatment by which many eyes can be saved.

In textbooks edited as recently as 1930 one reads a long list of surgical procedures which have been used in the past in attempting to bring about reattachment of a detached retina. These varied from simple evacuation of subretinal fluid to the production of artificial adhesions between the retina and choroid. They met with little success. The occasional cure reported did not change the hopeless prognosis of this condition. Failure was due to lack of knowledge of the pathogenesis of detached retina.

In 1930 ophthalmologists of all the world were electrified by a report of 240 cases operated on with a high percentage of cures by Gonin. The theories of Gonin and Leber regarding causation of retinal detachment, emphasizing the importance of retinal tears, lead to a wave of enthusiasm which has resulted in the development of several operative techniques by which many cures of this desperate condition can be achieved.

First of these various operations is that of Gonin himself, called thermo-cautery or igni puncture. It consists in plunging a white hot cautery point through an opening in the sclera and choroid into the retinal hole, where it is held for two or three seconds, searing the edges of the retinal tear and sealing it to the choroid by strong adhesions. Accurate localization of the tear is necessary. Because of frequent and serious complications which occurred following this procedure, other methods were devised.

The Lindner-Guist Chemical Cauterization method uses potassium hydroxide to cauterize the choroid through multiple trephine openings which do not perforate the choroid.

Other methods used extensively are those employing Galvano-cautery—simple cathode electrolysis—the pyrometric electrode of Coppez, by which the temperature of the electrode can be maintained accurately at 80° C.—and the Shahan thermophore, which also can be definitely regulated.

Probably the most widely used operation

today is that employing diathermy in electro-coagulation. There are two methods of using diathermy:

(1) Surface coagulation with blunt electrodes, recommended by Larsson's Clinic in Stockholm, aiming at coagulation of a large area of choroid to produce extensive chorioretinitis with resultant closing of the tear. A trephine opening is made to permit escape of the subretinal fluid.

(2) Electro punctures, producing coagulation of the choroid, as used in various forms by Weve, Safar, Walker, Gradle and others. Small needles made of platinum-iridium are inserted through the sclera, surrounding the tear and scattered throughout the area of the detachment. Usually it is not necessary to make a further opening to permit escape of the subretinal fluid because the fluid flows freely when the micropins are removed.

All of these operative techniques have the same underlying surgical principle, namely closing the tear and reattaching the retina to the choroid by firm adhesions. At present much research is being carried out and more experience is needed before the operations most satisfactory for the various types of retinal tears can be determined.

The results obtained by various eye surgeons using all operations in unselected cases have been most encouraging. The average of complete cures is about 50 per cent. Some surgeons have obtained up to 70 per cent cures. By cure, it is understood that the retina is replaced and remains so for a period of at least several months.

My personal experience, limited to 21 cases, is not sufficient to be valuable statistically, but the results have been comparable to the average reported by other operators. Of these 21 cases, 12 have been cured, and 9 have been failures. The earlier cases, operated on by the Gonin method, were failures. The diathermy method used in all the others has been more successful.

In many cases the detachment may be cured and the visual field restored but the visual acuity remains impaired in varying degrees. Recent histological studies by Reese have showed this to be due to cystic degeneration of the retina. All of which impresses us with the fact that even though we may have cured the detached retina we have not eradicated the basic eye disease of which the detachment was but a symptom.

In spite of the disappointments, the improvement in the treatment of detached retina, whereby useful vision can be restored to at least 50 per cent of sufferers formerly considered utterly hopeless, constitutes one of the most brilliant advancements in the history of ophthalmology, indeed of the whole of medical science.

DISCUSSION

Albert E. Leggett, Louisville: There are a few points I would like to stress as to the etiology. None of the theories offered explain all the cases of detachment of the retina satisfactorily. There are many contributing factors; probably age and sex are of as much importance as any other. We find that most of the idiopathic detachments of the retina occur in men past fifty years. Why this should be we don't know. However, there are other contributing causes such as syphilis, tuberculosis, rheumatism, cardiovascular disease, nephritis, many others. These of themselves do not cause detachment of the retina, but are contributing in some manner that we do not understand. Probably the underlying cause, if we could know it, would be some degenerative process and not an inflammatory process. A degeneration in the presence of any of the contributing causes would make it more logical for a detached retina to occur.

The retina, as you know, is probably the most sensitive nerve tissue we have. I think experiments have shown that light perception on the retina is the quickest reflex studied thus far. If that is true it stands to reason that the retina must have a very rich blood supply. This we believe is true also. However, there are certain features to this blood supply that I think it would be well for us to review. Due to its development and functional condition the retina may be divided into three neurons, a receiving, a conducting, and a connecting. The first neuron, the perceiving element of which the rod and cone layer is chief, derives its nourishment from the choriocapillaries and has no circulation of itself. The second and third neurons derive their blood supply through the central artery of the retina. Consequently, when a detachment occurs it is not a true separation of the retina, but is a cleavage of the retinoblast, so if the rod and cone layer are separated from the pigment epithelium which remains behind in the choroidal cone we can readily see that the nourishment to this area or layer is certainly markedly impaired.

I might mention a fourth neuron in connection with the vision. The first is the receiving, then the giant cells and dendrites which conduct the impulse to the nerve cell layer, which is the third, which conducts the impulse to the primary optic centers; and the fourth is through the radiations of Gratiolet to the occipital cortex. That doesn't involve us in detachment of the retina, but the longer a detachment persists the more interference with the neurons of the retina we find. Consequently it behooves us to operate early. Any of the operations I should say would be helpful, some more so than others, and the picture that Dr. Townes has presented us shows very nicely the procedure.

The purpose of all operations for detachment of the retina is to create adhesions between the retina and the choroidal cone, and if we can do this and do not follow up with attempting to treat the patient for what might have been present originally, I am afraid we are neglecting that patient.

We know that even after you do a successful operation, as Dr. Townes has shown us, other detachments are prone to occur. This does not militate against operation, but frequently repeated operations for detachment of the retina are certainly in order, and I would suggest the earlier done the more preservation of vision would we have.

We know that if we do not take some surgical steps to correct this condition, the eye is ultimately lost. It may be over a varying time of months, but certainly the ultimate end is blindness, and in the area where the retina had been detached, even though we are successful in reattaching it with fibrous bands, certainly vision is impaired. The longer the duration, the the more impairment of vision, so my suggestion would be an early operation and proper treatment after the patient has recovered from his primary or first detachment.

ACUTE POLIOMYELITIS*

J. LELAND TANNER, M. D.

Henderson.

No disease with which we have to contend is more insidious nor more terrifying to the patient and to his relatives and to the community; and in few, if any, other diseases is medical treatment less satisfying.

It shall not be the purpose of this paper to settle any of the controversial points of cause, diagnosis, or treatment either of the disease or the sequellae. I shall merely try to leave with you a few interesting ramifications of my own mind along the lines of infantile paralysis.

First let us consider causes as suggested, not proven by various workers. Is poliomyelitis caused by a virus or a streptococcus? I do not know. In the East, the general opinion is well settled upon a virus as the offender; in the middle west, there is some argument in favor of a peculiar streptococcus being the causative agent. Both sides of the argument advance logical and apparently conclusive proof for their contentions. It was my privilege to spend several days last year with the leading exponent of the streptococcus theory of origin. I have never seen a more industrious, untiring worker than Dr. Rosenow, as he studied every angle of polio-

myelitis in and around Mayfield at that time. Even Dr. Rosenow is looking for the agent of transmissal of the causative organism, be it virus or streptococcus. Which it is, I am not prepared to say—but would it not be well for us all to admit that possibly both views are correct, and that symbiosis may occur between the streptococcus and a virus or between two or more strains of virus?

What is the vector in the transmission of poliomyelitis? Again I do not know. Flies have been suspected but have you ever seen more flies than we have had this year? And have you seen much poliomyelitis? Is it water? Then why no more poliomyelitis this year, when we have had abundant rainfall. Or have the frequent rains washed the offender from the air as it sometimes does the pollens that plague the asthmatic? Mosquitoes? Surely not, because mosquitoes have been most prolific this year. Rodents or household pets have been suggested. Perhaps this may explain Mayfield's epidemic of 1937, following the flood which may have driven small animals to higher ground, but why have we had so little this year? And why didn't other high places have more last year? English Sparrows are suggested by Luusden as being a possibility in the dissemination of the disease, as are also some of the larger domesticated animals and fowls.

From the above random shots as to cause and agents of transmission of poliomyelitis perhaps some careful observation by the practitioner in the field may be of great value. Certainly, the research workers have as yet to prove conclusively any of their ideas along this line.

Volumes have been written concerning diagnosis of poliomyelitis. The first case in each locality is usually diagnosed when paralysis occurs, sometimes to the embarrassment of the physician. My own policy in all cases that I see is to do a careful examination, including reflexes, and flexion of the head and spine. I have not yet reached the stage that I can sit by the bedside of the patient, feel the pulse, look at the tongue, and make the diagnosis. I do not believe that mistaken diagnoses are the result of ignorance one tenth as often as they are due to carelessness. This is particularly true in poliomyelitis. The cardinal symptoms are well known—sudden onset, fever seldom above 103 degrees; pulse and respiration faster than usual with such fever; and pain, especially in the head and neck.

Reflexes may or may not be abnormal at the onset, however they frequently may be revealing and should always be checked. Diag-

*Read before the Kentucky State Medical Association, Louisville, October 3-6, 1938.

nistically, the spinal puncture is recommended and urged for confirmation of the infection. Normal spinal fluid is clear, and when the puncture is made, the fluid escapes rather slowly, drop by drop. In poliomyelitis there is an increase in the number of cells which give the fluid a ground glass appearance when held to the light. It is usually considered that a spinal fluid with more than 10 cells per cubic millimeter is pathological. In poliomyelitis the cell count is from 20 to 200 per cubic millimeter; very early in the disease, the majority of cells are polymorphonuclear leucocytes, but within 24 hours, the lymphocytes predominate, reaching to 75 per cent or even 90 per cent of the total count. This phase in the cell count is found in no common condition except poliomyelitis, and is an extremely valuable feature in diagnosis.

The differentiation of poliomyelitis from other diseases affecting the brain and cord usually presents little difficulty. Tuberculous meningitis may be differentiated by the presence of tubercle bacilli, and by the pellicle which forms overnight. Meningococcal meningitis of course usually shows the meningococcus in the strained smear. Sugar in sufficient quantity to reduce Benedict's or Fehling's solution will usually aid in eliminating epidemic or meningococcal meningitis as well as tuberculous meningitis, the former causing a total lack of sugar in the fluid, and the latter a reduction in the quantity.

Rosenow of the Mayo Foundation has developed a diagnostic precipitin reaction which deserves more than passing comment. His theory carries with it the idea of the poliomyelitis streptococcus being present in the body of the suspected case, at the time the test is made. The technique of the test is as follows: .05 to 1-10 c.c. of the Rosenow anti-streptococcal serum is injected intracutaneously usually on the forearm of the suspected case. A control of similar quantity of normal horse serum is made a short distance away, or on the opposite forearm. Within 15 to 30 minutes an area of redness greater than 10 millimeters in diameter constitutes a positive test, and is said by Dr. Rosenow to indicate a condition in the individual which will be benefitted by the antistreptococcal serum as developed by him. In those cases giving a positive reaction to the test Rosenow has used his serum, often with astonishing results.

Also by using this test, Rosenow has determined that in those cases giving markedly positive reactions, even after paralysis has started, the serum is of great value.

Whether the antistreptococcal serum of Rosenow or other methods of treatment should be used is largely a matter of personal opin-

ion. The standard treatment with the convalescent serum of a recovered case is of course logical and worthwhile. The dosage of convalescent serum varies from 5 to 40 or 50 c.c. depending upon the age of the patient and upon the severity of the disease. A 16 year old child with moderately severe poliomyelitis should have, in my opinion, 25 to 40 c.c. of the convalescent serum given intravenously. The amount given intraspinally varies of course with the amount of fluid withdrawn, but will usually approximate 1-2 of this amount.

If the Rosenow serum is used, fairly large dosage is recommended. In general, children up to 2 years should receive 15 to 25 c.c. of serum; from 2 to 5 years, 20 to 30 c.c.; from 6 to 12 years, 25 to 50 c.c.; and older children up to 75 c.c. He also recommends a repeat dosage 24 hours later even though the child has recovered completely, in order to prevent recurrence of symptoms with paralysis later. If no apparent benefit follows the use of the serum after 3 or 4 days, and the temperature has returned to normal the serum is discontinued. Rosenow's results have been quite outstanding, and, in my opinion, deserve consideration in the treatment of poliomyelitis. In my own limited experience, cases in which the serum was used did not have a great deal of residual paralysis. In fact, I have not seen a case with marked paralysis in which the serum was used. The most outstanding result I have seen was in a case with bulbar polio, in which the muscles of deglutition were involved. The serum was used, in spite of the advice of consultants, and complete recovery ensued.

Please do not mistake me—I am not advocating the antistreptococcal serum as being a specific for poliomyelitis, but it seems to do as much good as anything, and in this disease, anything that promises any relief at all is worthy of consideration and trial.

And along the line of treatment, let us suppose for just a minute that poliomyelitis is caused by a streptococcus. Then if that be true, is sulfanilamide indicated in the treatment?

The final outcome of any case of poliomyelitis is very uncertain for several days following the beginning of the paralysis. For this reason no opinion should be expressed regarding severity of the paralysis for quite some time. It has been my misfortune to make this mistake twice, once when I assured the family that there would probably be no paralysis, and again when I told the family that the child would probably never again be able to walk without braces. Both cases reacted exactly the opposite.

Late treatment of the after-effects of polio-

myelitis are best left to the orthopedic men, upon whom we should rely more than we do. Needless to say, our first concern is at least to do no harm in the anxiety of not doing enough. I believe it far more important to allow unaffected musculature to remain idle than it is to overstimulate partially affected muscles which may be easily overexerted, causing permanent damage. Again let me repeat—counsel with your orthopedic men before too active treatment is begun.

When the first case of poliomyelitis appears in a community, the first thought of every parent is: "What can we do to prevent our children from having this disease?" Many preventives have been suggested and tried but to date none have proven sufficiently reliable to warrant their wholesale use. Vaccines have not as yet been found to be satisfactory, and in some instances have proven quite detrimental. Nasal sprays have yet to be shown conclusively to be of sufficient value to be depended upon. General communicable disease precautions should be insisted upon by the physician in all cases. The patient should be isolated as a matter of course, with close screening and elimination of household pets. All discharges and urine and feces should be sterilized. It is generally considered that the period of communicability of the case is about 3 weeks, after which more freedom may be allowed.

In conclusion let me urge every member of this group to try to avoid if possible increasing the natural apprehension of parents during an epidemic, and to be always on the alert for the unusual in dealing with poliomyelitis, be it cause, intermediate host, treatment or final result.

DISCUSSION

John J. Moren, Louisville: There are two things I want to discuss relative to this subject: one, the panic that occurs; and the other, the diagnosis. You have all seen what happens in the family when there is a case of this disease in the community, and you all know the fear they feel.

We have many diseases in our communities that have sequelae far greater than those from this disease, and happen more frequently. Tuberculosis does not cause a panic, typhoid fever does not cause a panic. We also have pneumonia, syphilis and lots of other diseases in our communities that do not cause panics. Dr. Caudill referred to the 134,000 cases of syphilis in Kentucky, the 20,000 expectant mothers with syphilis, and the 11,000 new cases of it annually in Kentucky, yet this does not cause a panic.

After a study, one authority in Germany commented as follows about the 1,000,000 chil-

dren: He said 2,000 would suffer from poliomyelitis; of these 2,000, 1,200 would recover partially, 600 would recover completely, and 200 would die. But after all, there are other diseases that are far more crippling than poliomyelitis. Take, for instance, encephalitis. Nearly every one of those cases that I saw in our epidemic here in '21 and '22 and '23 developed a Parkinsonian manifestation. That is a far greater percentage than occurs in poliomyelitis, and there is nothing more distressing to look at than the Parkinsonian syndrome.

How is poliomyelitis contracted? I do not know. I had one experience, however, that made me think. I had an adult with a typical poliomyelitis history and poliomyelitis paralysis of the right leg. That man was talking to an individual who had a similar complaint and he was in close contact in conversation, and five or six days after this conversation this individual developed the picture that he presented. That looked like it was transmitted from one patient to the other. Whether this is streptococci I do not know. That is the only instance that I have had where one patient has come in contact with another and developed the disease.

I know nothing new about the diagnosis. I know we have problems. They talk about the abortive cases, but how in the Lord's world are you going to diagnose an abortive case of poliomyelitis? It has the picture of the summer flu, it has the picture possibly of an upper respiratory disturbance, you have no symptoms that are particularly striking or characteristic of poliomyelitis. It seems unkind and I certainly do not believe in puncturing the spine for every case of cold or cough that we have. I believe puncturing the spine is a pretty delicate operation and should not be abused, but carefully done. Consequently I have no way in the world to diagnose an abortive case of poliomyelitis. Doubtless they occur. There are instances on record where a case of poliomyelitis has occurred in the family and other children in the family had various aches and pains and upper respiratory manifestations. Were they or were they not abortive cases? There is no evidence, none at all.

A word about the cerebrospinal fluid. In the Children's Hospital here in the city we have some pretty stiff problems to study. Last year there was a case brought in from a surrounding neighborhood, and there was a question of whether it was or was not poliomyelitis. The cerebrospinal fluid was negative as far as pathology was concerned. That might mean nothing at all because usually the cases that are brought in there are anywhere from two to three, possibly four weeks old, and by that time the cerebrospinal fluid has made almost normal adjustment. But we have had the ques-

tion to occur: Can we have poliomyelitis with a normal cerebrospinal fluid?

I became interested in that question and I looked it up, and to my surprise I found that the authors will give you anywhere in the neighborhood of 12 per cent with a negative cerebrospinal fluid. That is worth nothing as far as the changes in the cerebrospinal fluid are concerned. If you can get the history there is nothing that will present the picture that poliomyelitis does. In the early stages you have the polymorphous leukocytes, and in the course of a few weeks that will change to a lymphocytic manifestation. Nothing else will do that. That is explained on the basis that you are dealing at first with an inflammatory condition and later on you have the extravasation of the lymphocytes and they occur around the perivascular and lymph spaces. Remember that you can have poliomyelitis with a normal spinal fluid.

As to some of the symptoms, I want to call your attention to the type of pain that occurs in poliomyelitis. It is not a localized pain. Those children will tell you, "The pain is in my arm." They will not say it is located in this joint or located in this hand or in this particular spot. That is more or less characteristic of the so-called root pain or spinal cord pain which is the origin of the pain in poliomyelitis.

The patient with poliomyelitis is particularly liable to sweat. Perspiration is increased, especially of the affected limb. You will notice that possibly more frequently than you will in any other acute infectious diseases.

When ever a mother brings a child to me and says, "Doctor, I have had more trouble in trying to get this child's bowels open," she has use enemas, she has used laxatives of all kinds, I am suspicious in those cases, and the only explanation that I can give for that condition is the stimulation of the sympathetic in the lateral horns of the spinal cord from the inflammation and the anterior horn.

In the Children's Hospital we have to make a differential diagnosis between poliomyelitis and that clinical manifestation that is spoken of as acute infectious polyneuritis. In these cases we have difficulty. There is a little child in the hospital today, brought in there about two weeks after the apparent onset. He has had a complete diplegia with deviation of the left eye inward; in other words, a paralysis of the sixth. Was this a case of neuritis? Was this a case of poliomyelitis? There we were, with a flaccid diplegia, no reflexes; we could not determine any sensory changes; our cerebrospinal fluid was negative; the blood examination was negative; the blood Wassermann was negative. That brings up this question: the history of the case. This child developed this paralysis over a period of something like two or three weeks. Well,

that is not poliomyelitis. Poliomyelitis develops quicker than that. So we are contending, we believe, with a polyneuritis.

We have a number of those in the course of a year. That brings up the question of the onset that Dr. Tanner referred to. He said that it was sudden onset. That will not hold true. Thirty or forty years ago it would hold true, more so than today. I remember cases that would develop in practically twenty-four hours. A little child would have acute digestive disturbances, fever, complain of pains in the back, pain in the head, pain in the limbs, and the next morning when he gets out of bed he has a paralyzed leg or arm. Today you will see those cases running along for three or four, five or six days before they develop paralysis. I recall seeing a case some two years ago when we had the epidemic here. The family physician had been treating that child for three or four days. He thought he had a poliomyelitis. There were no special characteristic symptoms at all; he did not have the spinal sign; he had an elevation of temperature and that disappeared, and then in two or three days he had another elevation of temperature and they took the cerebrospinal fluid and found the polynuclear cells, increase in pressure, increase in globulin, and in the next day or two the little child presented paralytic symptoms. So with the new picture of poliomyelitis you may not expect a sudden onset. It may be two or three days, and if there is a prevailing epidemic, be on the lookout.

As far as the treatment is concerned, I know nothing that is worthwhile that I can really recommend.

Philip F. Barbour, Louisville: I think one reason there is such a public fear of poliomyelitis is because the doctor feels so helpless in combating it.

There has been an enormous amount of research done about this disease, but it is not yet absolutely determined whether it is due to a virus or a polymorphic strain of streptococcus. Nor is there absolute agreement as to whether the infection gains entrance through the nasal tract or the intestinal mucosa. However, it has been definitely proven that the infection can be transmitted quite readily to the monkey by taking material from the nose of an infected monkey and putting it in contact with the olfactory nerves of a healthy monkey. Heretofore it has been difficult to explain why if the infection did take place through the olfactory nerves there was no evidence of disturbance until the lesion reached the anterior horn of the gray matter of the spinal cord when typical symptoms of poliomyelitis developed.

Dr. Harold K. Faber has shown by a series of interesting experiments and by the use of new stains for the nervous system that the

course of the infection can be traced day by day from the olfactory bulb to the cervical plexus and explains the occurrence at times of bulbar paralysis.

W. W. Nicholson, Louisville: I agree with the points in Dr. Tanner's paper in many respects, especially where he says we know nothing about the cause, we know nothing definitely about prevention, and we know nothing definitely about treatment.

The questions that I want to ask are: If that is true, what are we going to do as practicing physicians in epidemics of poliomyelitis? In this age we all think that we have to have a specific therapy for every disease when in fact there are very few diseases for which we have specific therapy.

Then what are we going to do in preventing poliomyelitis? The only thing that we can do that has any sense at all in it is to carry out ordinary isolation precautions, as we would do in any infectious disease. That is all we can do. I think it is absolutely wrong to try putting different solutions of any kind in the nasopharynx or giving any vaccines of any kind, because we have nothing definitely proved, and we haven't anything that even looks good. I do think we can carry out ordinary isolation precautions and also keep our children out of crowds. This may not do any good, but certainly it is good common sense.

What are we going to do in treatment? We are at a disadvantage in poliomyelitis, for the simple reason that the author stated, the excitement of the public. While we have no definite, specific therapy, we do have treatment for poliomyelitis, the same as any other disease, and the treatment, as I see it, as Dr. Barbour stated, is putting the child absolutely at rest in a quiet room and making him comfortable and supporting his muscles so as to prevent any deformities, ordinary palliative treatment as you would use in any acute systemic infection, which is what poliomyelitis is.

I think that our research should continue, of course. I would like to say, though, that many of our research workers in an epidemic of poliomyelitis become very excited also, and most of their research work is not worth much because there are no definite controls. We will have to use the same method in the same locality and run our controls there, because no two epidemics of poliomyelitis are the same. They even vary within the same epidemic and the same locality. For that reason, your control on your research work must be run in that epidemic.

J. Leland Tanner, (in closing): I first want to thank Dr. Moren, Dr. Barbour and Dr. Nicholson for putting a little meat on the bones of my outline.

Dr. Moren brought out an awfully interest-

ing point, and that was the seriousness with which a spinal fluid drainage should be considered. I agree with him. When you get two or three miles out of town and suggest draining a spine, it is a little bit of a problem. Usually you will find the family has heard of some other person's child that had a spinal tap and died. They usually put a spinal drainage in about the same category that they put diphtheria antitoxin; "Well, it will either kill or cure," so it is a little bit of a problem at times to do a spinal puncture in the home.

After all is said and done, I think Aycock, one of the outstanding research artists in poliomyelitis, expresses it rather neatly when he says, "Let's compare poliomyelitis to Pike's Peak. We can climb to the top of Pike's Peak, put a compass up there, and say that the peak extends so many miles north and south, so many miles east and west, and it is composed of so many tons of some specific type of dirt and so many tons of some type of rock, but after we have done that, who put Pike's Peak there and what are we going to do about it?"

MY OBSTETRICAL EXPERIENCE*

C. V. STARK, M. D.

Maysville.

During my 38 years of obstetrical practice I have used homemade pads, newspapers, brown paper, sheets, quilts, blankets, rubber sheets, Kelly pads, but of late I am using the steel white douche pan with folded towel over it and the obstetrical Alco sheet under it, under my patients; the douche pan acts as a receptacle for the urine, feces, amniotic water and the placenta, this protects the bed. Also roll up the gown under the patient, place pillow under patient's back and three pillows under the shoulders and head. I deliver my patients in their homes and find it more satisfactory than in hospitals and less expensive.

I am insisting that all of my pregnant cases come to my office for examination once a month the first six months; twice a month the next two months, and the last month once a week and any abnormal conditions I find I try to rectify them. I also insist that they pay me \$15.00 in advance and the \$10.00 balance upon delivery or weekly thereafter, provided they have jobs.

I advise my normal patients when in labor to call me when the labor pains are regular and five minutes apart, and then I am not detained so long.

When I have my patient arranged in bed with sterilized hand I make a vaginal exam-

*Read before the Mason County Medical Society.

ination to find position of child, this after thoroughly washing the privates. If I find a rigid cervix and perineum, I use plenty of olive oil and dilate parts with fingers, and hand, and if the pains are weak, I use hypodermic 5 m. pituitrin as it may be needed with sulphate quinine two grains, and one capsule Amytol. I use 5 per cent solution of Mercurochrome to paint the vagina, and plenty of alcohol on hands and gloves. As the head comes through the cervix, I knead it over the baby's head, and as the head comes through the perineum, I support the perineum with my right hand and work perineum over the child's head with left hand, and by this method learned from my father 40 years ago, I hardly have any lacerations, and by using plenty of olive oil and hot towels, which also assist in dilatation.

As soon as the baby is born and is not breathing, I catch it above the hips by left hand, and pat on back with right hand, and by using pan of hot water and artificial respiration, I seldom lose a baby. As soon as the baby is born, I give the mother one dram fluid extract Ergot. Then I tie cord one inch from belly with umbilical tape; if the cord is large, use a metal clamp. Then tie cord again one inch distal and cut with sterilized scissors; then have baby saturated with olive oil, wiped dry, powder with baby powder between legs, around neck, under arms and navel; then saturate end of three inch bandage with alcohol, wrap navel stub then around belly three times, tear and tuck under. Have nurse put belly band over this and pin in front. So many old fogies still pin the band on the back. I try to stop that nonsense. Then I drop two drops of a 1 per cent solution of nitrate silver in each eye; have baby weighed and dressed. Then I go to mother, deliver the placenta by the Crede method, place in douche pan and turn mother on side, take out douche pan, have it emptied and sterilized, wash mother and dry, apply folded diaper or Kotex saturated with alcohol to privates, take out pillows, place a pad under mother, turn her on back and let rest. If multipara, use belly band on mother and leave fenbane one every hour for afterpains as needed. I try and see my patient at least three times the first week and the first return trip make out the birth report.

Be sure and examine the baby's urethra and rectum; I have found a few with them closed and had to operate. I always advise the mother to stay in bed at least ten days after delivery; place on light diet, see that both the baby and mother void urine and bowels act each day.

I had a patient last week with uterine inertia which the pituitrin did not work, and I had to use chloroform and forceps. The man was in the lower income class and tried

to get me medical help but some of them wanted him to put up \$25.00, so he could not pay the price, and I did the work.

Under my plan of delivery, I seldom have any puerperal fever or other complications to develop. Our efficient health department here in Mason County render me real service in our obstetrical work. Don't forget the douche pan in your next labor case.

ACHLORHYDRIA*

W. S. WYATT, M. D.

Lexington.

Achlorhydria and achylia gastrica denote separate conditions, yet the terms have been used interchangeably. As far as I have been able to ascertain Ewald was the first to use achlorhydria to signify an absence of free hydrochloric acid in the gastric secretion. Einhorn coined achylia gastrica to represent the lack of not only free hydrochloric acid, but also of the ferments, rennin and pepsin. Various authors have estimated that 14 per cent of the average population are achlorhydric while achylia gastrica is comparatively rare.

Achlorhydria is found in a variety of acute and chronic infectious diseases and is often a sequela of them as well as of some toxic conditions and of certain nervous and mental states. It may accompany or follow diphtheria, influenza, pneumonia, typhoid, gastroenteritis, pulmonary tuberculosis, rheumatic arthritis, syphilis, heart disease, malaria, diabetes mellitus, Graves' disease, chronic cholecystitis, pellagra, sprue and chronic alcoholism. Recently Wilkinson and Oliver have found it in urticaria, acne rosacea and dermatitis herpetiformis. In chronic gastritis it is always present and may accompany carcinoma found anywhere in the body. Females are more frequently affected than males. The incidence of the condition increases with age, from 4 per cent at 20 years to 26 per cent at 60 years. Conner found the incidence of achlorhydria 25.9 per cent in blood relatives of pernicious anemia patients of an average age of 37 years as compared to 10.5 per cent in the control series of patients in age group 30 to 39 years. The control group received test meals on account of various gastric complaints or because they were suspected of pernicious anemia.

Various theories are advanced as to the cause of achlorhydria. Nervous influences, emotional upsets and psychological factors may play a part in inhibiting gastric secretion. If transient emotional stimuli can cause such changes, some think, it is possible that permanent changes may be induced by

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prolonged emotional stimuli such as the fear element which is associated in psychoneurotic states.

The incidence of achlorhydria is sufficiently high in new-born babies and infants to cause some writers to think that it may be congenital or that an inherited factor is present. Conner thinks it unlikely that achlorhydria itself is inherited, but rather the tendency to its development later may be an inherited factor.

Hartfall believes there exists an hereditary predisposition to the cessation of gastric secretion, the basis of which is a gastric mucous membrane of functionally subnormal type. This subnormal mucosa may easily be disturbed by various factors. Many of these injurious agencies are exactly those which cause gastritis, and, in this particular inherited hyposecretory type, achlorhydria quickly develops. The multiplication of these injurious factors as age advances, accounts for the increasing incidence with age.

Faber maintains that achlorhydria has an exogenous cause and that it is produced by external factors acting on the stomach either by direct irritation of the mucous membrane or through the blood stream by a toxic action on the gastric parenchyma. The anatomical picture of gastritis will develop in both cases and the gastritis may lead to more or less atrophy of the glands; but achlorhydria occurs at such an early stage of gastritis that there is no question of atrophy, to say nothing of anadenia. Achlorhydria, therefore, may be found in combination with anatomically preserved glands and undamaged gland cells, although there is a well pronounced gastritis.

PATHOLOGY

Nothing was known about the pathology of early achlorhydria until recently. This was due probably to early post-mortem changes of the gastric mucous membrane. Hayem in France and Faber and Block in Copenhagen injected formaldehyde into the abdomen immediately after death and obtained excellent fixation. The latter authors have shown that in infants having achylia for some months following an acute infectious disease and dying of another cause, there is a very definite early gastritis, an infiltration of round cells extending to the submucosa. In older children where the achlorhydria had continued for a longer period, there was greater evidence of chronic inflammation; the round cell infiltration was more pronounced and there was beginning degeneration of some of the cells of the gastric epithelium as well as the gastric glands. In adults where there were repeated insults to the stomach, there

were various stages of inflammation found. In the early stages there was found degeneration of the cells of the gastric epithelium and glands and moderate round cell infiltration. Later stages showed more degeneration of the epithelium and beginning atrophy of the glands with greater round cell infiltration. In stages still more advanced, the epithelium was entirely degenerated, only a few glands remained, the others being replaced by cysts and marked round cell infiltration extending into the muscularis. The advanced stage showed the epithelium replaced by intestinal epithelium and goblet cells and the complete disappearance of the glands.

The older writers, Fenwick, Ewald, Kinnicutt, Nothnagel and others, were familiar with the pathology of atrophy of the stomach and Henry and Osler had some excellent drawings of their case. While the pathology was known for some time, little was known about the symptomatology until Einhorn urged that all cases be studied thoroughly in regard to this.

The symptomatology which follows was obtained from the study of 250 patients which have been treated at the Lexington Clinic. In this group no cases of pernicious anemia or carcinoma of the gastrointestinal tract were included.

Total Number of Cases	250	
Average age	49.8 years	
Youngest	11	
Oldest	85	
Average duration of symptoms	3	5-6 years
	Cases	Per cent
Males	91	36.4
Females	159	63.6
White	243	97.2
Negro	7	2.8
Distention	130	52.
Constipation	121	48.4
Pain	97	38.8
Weight loss	81	32.4
Pyrosis	76	30.4
Anemia	59	23.6
Nausea	53	21.2
Diarrhoea	40	16.
Vomiting	30	12.
Alternating constipation and diarrhoea	14	5.6
Glossitis	12	4.8

SYMPTOMATOLOGY

The symptoms of achlorhydria are not clear cut and it is doubtful if a diagnosis can be made from them alone. A person apparently may be in good health for years and have achlorhydria. The history often obtained is that the symptoms followed some indiscretion in diet, a drinking bout, or an acute infec-

tious disease, such as influenza. Distention in the epigastrium, which may be quite distressing, and continue for several hours after meals, is the commonest symptom, occurring in 52 per cent. Some hours later the distention may be in the lower half of the abdomen. Pain, which may be either sharp and cramping or a dull ache, may occur anywhere in the abdomen and shift its location frequently or it may be confined to the left hypochondrium. Some complain mostly of pyrosis which at times can be as annoying as that seen in hyperacidity. Occasionally borborygmi are so loud as to be embarrassing, particularly to female patients. Nausea is a prominent symptom and recurs at intervals during the day. Vomiting occurs about half as frequently as nausea and is rarely severe. The appetite usually remains good but a few patients become afraid to eat on account of the distress following a meal. One of the rare symptoms is glossitis but when it is present the patient complains bitterly of it.

There were three patients with leucoplakia buccalis et lingualis that complained only of sore mouth and tongue.

Constipation was present in 48.4 per cent, diarrhoea in 16 per cent, and alternating constipation and diarrhoea in 5.6 per cent. The diarrhoea may be mild, 3 to 4 unformed or watery stools a day, or it may be of the intractable type with 12 to 15 or more watery stools. In an occasional case the diarrhoea may begin as soon as the patient gets out of bed each morning and subside by mid-forenoon. No blood is passed in the stools and rarely any mucus. Considerable flatus is often present. There may be some urgency in defecating but no tenesmus or griping. In those that have alternating constipation and diarrhoea, the diarrhoea may follow some laxative or some indiscretion in diet or it may begin without apparent cause and last several days, weeks or months before subsiding. These symptoms tend to recur every few weeks or months. Some give a history of these attacks continuing for a year or longer and then subsiding for several years before recurring. The alternating constipation and diarrhoea of achlorhydria may be distinguished from that occurring in chronic amoebic dysentery, in that there is no griping or tenesmus nor any mucous or blood in the stools. Hypochromic anemia was present in 23.6 per cent of the cases. Loss of weight was present in 32.4 per cent. The latter symptom was complained of by only a few patients.

DIAGNOSIS

Some cases of achlorhydria with anemia and glossitis must be differentiated from pernicious anemia while others showing loss of

weight, anemia and gastric symptoms cause one to suspect gastric carcinoma. In pernicious anemia, with rare exceptions, there is always present achylia gastrica and the anemia is macrocytic in type and bilirubin is increased. Where in those showing only the absence of free hydrochloric acid, there is a microcytic anemia. In carcinoma of the stomach there may be an achlorhydria or an achylia gastrica. The blood findings will be of no help and only an X-ray examination of the stomach will clear up the diagnosis.

The fractional method of gastric analysis as advocated by Rehfuess was quite an advance over the single extraction of the Ewald test. Eggleston compared the two methods and found that achlorhydria was twice as great by the latter method.

Those patients whose gastric analyses show no free hydrochloric acid should be given histamine hypodermically in dosage large enough to obtain the physiological effect of a diffuse erythema. The dose varies between 0.25 mg. to 1 mg. of either histamine hydrochloride or histamine acid phosphate. The response to histamine probably represents the maximum secretion of the gastric glands.

In recent years various investigators have been testing the viability of the gastric mucosa and its ability to excrete a dye, neutral red. This dye is non-toxic and non-irritating. It is given intravenously and recovered in the gastric secretion. The results of these investigations have been verified as well as criticized. But in spite of the confusion at the present time in the use of neutral red, it seems to give promise of being a valuable aid in helping to ascertain the secretory and excretory functions of the gastric mucosa.

TREATMENT

The prognosis in the majority of these cases is good. The glossitis, I believe is due to an avitaminosis from being on a very limited diet over a long period, rather than to the achlorhydria. At any rate this symptom improves very satisfactorily on a smooth diet rich in vitamins and with proper amount of dilute hydrochloric acid, either with the meals or afterwards. The smooth diet with dilute hydrochloric acid relieves most of those complaining of distention, pain and pyrosis. An old method of treatment which is helpful for refractory cases having these symptoms, is daily gastric lavage. An occasional patient's symptoms are aggravated by dilute hydrochloric acid but for some reason, which I have not seen explained, they improve under medication with alkalis. Often a mild sedative for a week or two, taken one-half to one hour before meals, is helpful in the extremely neurotic patients. After a month or longer

on the smooth diet, a fairly general type of diet is allowed, avoiding fried, greasy foods, pickles, alcoholic drinks, etc. For the microcytic anemia, which may be present, some form of inorganic iron by mouth in doses of grs. xlv to grs. xc daily should be given rather than attempting to use a parenteral preparation of iron. The nausea and vomiting usually subside readily after treatment is begun and so does the diarrhoea. An occasional ease of diarrhoea will be difficult to control and in such, powdered opium, paregoric or the deodorized tincture of opium should be given in adequate doses. Recently desiccated hog's stomach (ventriculin) has been reported to be as effective as hydrochloric acid in relieving the dyspeptic symptoms and diarrhoea. For the constipation, some of the various demulcents and mucoids taken during the day with mineral oil at bed-time give relief. Most patients begin to regain their loss in weight soon after treatment is begun. The dilute hydrochloric acid should be given in adequate amount, one-half drachm to two drachms in a glass of water t. i. d. This acid should be taken through a drinking tube to prevent destruction of the enamel of the teeth. A few writers have recommended some of the organic acids as substitutes for dilute hydrochloric acid where patients object to the latter. But as brought out by Ewald long ago these are poor substitutes.

In recent years glutamic acid hydrochloride has been used instead of dilute hydrochloric acid and has been found to be very satisfactory.

COMMENT

Achlorhydria is not a clinical entity but is an objective symptom of gastric disease. When it is present, the subjective symptoms may cause considerable distress.

In those patients whose gastric analyses showed no free hydrochloric acid after the injection of histamine, it has been our experience that it did not return under treatment.

There were a few patients in the group whose gastric analyses were normal or showed a subacidity and on returning some years later for examination were found to have an achlorhydria. Under treatment achlorhydria may disappear and the gastric secretion return to normal. But it is conceivable that as more gastric epithelium and glands become degenerated, the achlorhydria may become an achylia gastrica. We are of the opinion that subacidity and achlorhydria are early transition stages of achylia gastrica.

SUMMARY

Achlorhydria is a symptom of gastric disease.

Its incidence increases with age.

Women are more frequently affected than men.

The symptomatology is varied and a diagnosis cannot be made from it alone but the condition is easily diagnosed by laboratory procedures.

The treatment of the condition is satisfactory in the majority of cases.

DISCUSSION

Frank M. Stites, Louisville: As a slight digression from the paper I would like to emphasize the importance of a complete gastrointestinal study on those patients who present gastrointestinal symptoms. As a man doing internal medicine, with especial attention to gastro-enterology, I don't believe anything comes to my attention more than the number of patients who come in with typical gastric or intestinal symptoms, or both, and who have had no proper gastrointestinal study. By that I mean not only X-ray, but principally the test meal study. The laboratory study of gastrointestinal cases is not a difficult one; it is one that can be carried out in our smaller communities; it does not have to be limited to a community that has hospital or laboratory facilities. It is astounding to see the number of patients who have been seen by competent men, maybe for a period of months or even years, and who come to see you in their round of physicians, complaining of the same symptoms they have had previously, no gastrointestinal study and no secretory study having been made of the gastric function.

I do not think it is of importance as to the type of test meal study. In general work, simplicity is probably more important. The ordinary Ewald test meal usually suffices.

The biggest difficulty in making this study, or the thing that is missed more frequently than anything else is the way in which the examination is hurried. Dr. Wyatt mentioned it but did not emphasize it. Too often we are satisfied to remove one specimen at the end of sixty minutes. Our study should begin prior to that, at least forty-five minutes after the taking of the meal, and should always be carried beyond the one-hour period, preferably ninety minutes, sometimes as long as two or two and a half hours after the ingestion of the meal. It is astounding to see the number of cases of achlorhydria that you will find. In statistics from larger centers, ten to fifteen per cent of the average gastrointestinal cases are cases of achlorhydria, and this percentage should not be overlooked.

Most of these cases that come to you that

have not been studied in the laboratory have been treated for hyperacidity without any confirmation of the suspicion of the physician.

The diagnosis of achlorhydria as given by Dr. Wyatt is concise and is very proper. The differential diagnosis between achlorhydria and achylia gastrica is not easy; it requires special technics to detect the presence of ferments in the gastric secretion. Even today the methods most commonly in vogue are not entirely satisfactory, and considerable work is being done along this line. So many diseases present achlorhydria that it is doubtful as a disease entity, although sometimes it seems purely to be functional and not associated with any pathology. In those cases it always behooves us to look for the extra-gastric causes. I am not going to repeat the gastric causes or to dwell upon them, as Dr. Wyatt covered them fully, except to mention three: chronic gastritis, gastric carcinoma or gastric malignancy, syphilis of the stomach.

The extra-gastric causes I do want to emphasize a little bit more: pernicious anemia; combined sclerosis, which is usually a complication of anemia; chronic cholecystitis; sprue, pellagra; cancer of the intestinal tract; hepatitis; profound myocardial weakness; chronic diseases such as tuberculosis and nephritis.

Having spent some years in the Orient, I have been particularly interested in recent years in a review of the literature on sprue, which is classified as a tropical disease. Its response to liver therapy I think almost positively classifies it as a certain stage of pernicious anemia. Those cases that previously were so hopeless, today respond miraculously to liver therapy.

One other thing that I think is important to bear in mind if we can make test meal studies of our gastric cases is to remember that we may have an achlorhydria even with an X-ray deformity or an X-ray diagnosis of gastric ulcer.

A recent report from one of the larger eastern clinics showed four and a half to five per cent of cases that were studied microscopically, and their previous X-ray diagnosis of ulcer confirmed, had shown throughout the entire study an achlorhydria. You must also remember that only from one-half to three-fifths of the cases of gastric malignancy show achlorhydria.

In regard to treatment, there is very little left to say. I have found in my own experience simply saying the administration of hydrochloric acid many times is not sufficient. I think it is almost as variable as the number of patients we see as to the best method of administering hydrochloric acid. My routine is to prescribe hydrochloric acid with the meals, twenty, thirty, forty, fifty, or sixty drops, or even larger doses sometimes, to be given in a glass of water to be taken with the meal, that water sipped during the

mealtime. My experience has been that the large majority of patients can tolerate it this way better than any other, and a larger percentage of them receive relief from their symptoms when it is administered this way. There are a few patients who receive much better benefit when it is given just prior to the meal, and there is a little larger group who receive benefit in taking it after the meal. Some of those take it in broken doses fifteen minutes after the meal, the remainder of the dose thirty minutes after the meal.

One thing I want to mention that Dr. Wyatt did not emphasize is the question of avitaminosis in achlorhydria. I have had a rather pleasant experience in the administration of some of the vitamin elements, particularly in combination with liver extract, in a preparation called reticulogen. It can be given once or twice a week with marked relief of symptoms, applying the vitamin deficiency that is necessary because of the type of diet these individuals have to eat, and there is a general improvement in the patient's condition that is most pleasing not only to the doctor but to the patient himself.

THE COUNTY HEALTH DEPARTMENT IN TUBERCULOSIS CONTROL*

CHAS. D. CAWOOD, M. D., C. P. H.
Fayette County Health Officer

Lexington.

The application of tuberculosis control procedures through full-time local health service has become definitely fixed in the minds of county health officers as a necessary part of the general public health program. There seems to be no logical reason why tuberculosis and syphilis epidemiological studies, isolation procedures, education and follow-up work should be any different than that carried out in other communicable diseases participated in by local health personnel. All epidemiological studies agree that tuberculosis spreads through the so-called "open cases," as in all other communicable diseases. From a public health viewpoint, then we are interested in curtailing the movements of the open cases in order to reduce to a minimum the liability of disease spread. We in public health are not blessed with sufficient funds to do all in communicable disease control that we would like to do, and so it is necessary to familiarize ourselves with the incidence of specific diseases in our local community, and plan a program that will reach the most people with our limited staff personnel. It is a further essential that we become familiar with our local population,

*Read before the Southern Tuberculosis Conference, September 19-21, 1938, at Louisville

classify the population into different financial layers, occupations and other characteristics, in order to realize the most effective results. We are all cognizant of the fact that tuberculosis recognizes no difference between the rich and poor, white and colored. Even if it did the higher financial group is dependent on the lower and the colored group for domestic and other aid. In this manner if domestic and other aid is afflicted with the disease in its active stage it is transmitted through them to others. Therefore there is no known reason why the higher strata of our population should feel that they are not liable to acquire the disease tuberculosis.

It seems that when individuals in the upper financial layers of the population acquire tuberculosis that they want to immediately demand their physician to keep it quiet. The physician in many instances complies with the patient's request in order to continue the family practice. This might be satisfactory if the physician would administer the Mantoux test, examine and X-ray all the contacts so as to reveal other possible infections in the home, but actually we all know that this procedure is not followed, and the result is that infection is continued among family members. In my opinion, the physician handling a case of tuberculosis, not reported to the health department, should follow out the routine of completely clearing up all possibilities of infection among every immediate contact, and see that the infected is properly isolated from the non-infected, as he would do with diphtheria, or if he does not have time to carry out the procedure he should for the benefit of the community, properly inform the infected person, and report the case to the health department and request that a complete investigation be carried out in the affected home. We won't find many open cases if our practicing physicians continue to throw out a smoke screen around their known cases, and compel the health departments to rely on death certificates for information.

CASE FINDING

The county health departments have a limited staff and the programs must be planned so as to reach the most people in the most effective manner. In county health work many health programs are carried, and if tuberculosis work is to be carried as a service to the people it must necessarily become a routine along with other health work. In my opinion, if we consider the prevention and control of tuberculosis, as being no different from any other communicable disease, affecting infants, pre-school children, expectant mothers, school children and all other health classifications of a population we necessarily

mold into our community a routine tuberculous service.

In planning the tuberculosis program along with other routine services it is essential that the health officer determine what lines to pursue to reveal the most initial and subsequent active adult cases, and how his limited staff can best bring these cases under control. It has been my experience that cases are found in the following manner: physicians, sanatoriums, death certificates, chest clinics and Mantoux tests followed by subsequent examination and X-ray.

It is quite apparent that the average private practitioner of medicine does not report his cases of tuberculosis. There are probably many reasons for this which might be listed as follows:

- a. The case may not have been recognized in its early stage from clinical examination.
- b. The next physician that attended the case saw it in the far advanced stage, and assumed that the first physician or physician had reported it.
- c. The family demanded the physician not to report the case.
- d. The disease, tuberculosis, has been here so long and so many people have it that it is not exciting enough to cause the thought of reporting.

In my opinion, the practicing physician does not, in most instances, intentionally fail to report tuberculosis, but that in his busy practice he fails to realize the dangers of the disease to his community and to the other members of the family which he serves. I further believe that if we could, in some practicable manner, bring about an understanding with regard to tuberculosis as a community liability among our physicians and community that the disease would be reported.

When a county is fortunate enough to have a sanatorium as we have in the Julius Marks Sanatorium in Lexington, initial cases are readily reported. Dr. E. J. Murray, Superintendent of the Sanatorium, considers tuberculosis a communicable disease and requests a complete investigation, and examination of all contacts. The health department follows up all cases that come to the sanatorium, Mantoux tests all contacts and all reactors that can not afford to go to their private physician for examination and X-rays are referred to a chest clinic and thence to the sanatorium for subsequent X-ray. In this way the Julius Marks Sanatorium has a co-operative staff of epidemiological field workers in the health department personnel, who make complete follow-up studies and bring about effective isolation prior and subsequent to sanatorium treatment.

THE MANTOUX TEST AND CASE FINDING

It has been our observation that the Mantoux test is an excellent procedure to apply in epidemiological studies. In a routine health service it would be impossible to apply this test as a routine for in doing so the staff would not do much more than administer and read tests. It would take years for the average health department staff to follow up thousands of reactors to their homes and guide the people in acquiring examination and X-ray. It is, therefore, necessary that the local health officer determine what group or groups to which the Mantoux test should be applied in order to find the greatest number of reactors which when subsequently examined and X-rayed would reveal the most active adult cases of tuberculosis. In determining what group to test in a general public health program to find the most secondary cases, since these are the most dangerous to the community, I would like to submit for your consideration the following combined observations carried on by the County Board of Health and Dr. George Wilson of Lexington:

This study shows a total of 12,685 Mantoux tests, 4,870 reactors, or 38.39 per cent, and represents, it is thought, a fair sample of all ages in our local health area, a population of approximately 76,000 people.

MANTOUX TESTS, 1934-1937

Items	Total	White	Colored
School Age (6-18)	8,699	6,724	1,935
a. Reactors	1,927	1,419	508
b. Percent	21.15	20.00	26.25
Maternal (16-38)	361	291	70
a. Reactors	168	149	19
b. Percent	46.53	51.20	27.14
Pre-School Age	405	300	105
a. Reactors	75	50	25
b. Percent	18.51	16.66	23.80
Open Case Contacts	3,220	2,500	720
a. Reactors	2,700	2,100	600
b. Percent	83.85	84.00	83.33
All Ages Total	12,685	9,855	2,830
a. Reactors	4,870	3,718	1,152
b. Percent	38.38	37.72	40.70

It is readily seen that the per cent of reactors is least in the pre-school group and most in the open case contact group as would be expected. I would like to point out that in our maternal clinic the test is applied as a routine and all reactors are subsequently X-rayed regardless of the clinical examination.

In the group of reactors of school age 1,000 of the 1,927 were subsequently X-rayed and among these there were 105 primary active cases of tuberculosis or 10.5 per cent and 5

secondary active cases or 1-2 of one per cent. These 1,000 reactors X-rayed were followed into the homes and through the examination. Mantoux test and X-ray of 500 individuals we found 50 primary cases and 3 secondary cases. So in our Mantoux tests of 8,699 school age children, X-ray of 1,000 of the 1,975 reactors and Mantoux test and examination of 500 adults and children in the homes of these reactors we found altogether 155 primary cases of tuberculosis, 5 secondary cases in school age children and 4 secondary cases in parents of these children. All of you realize that this procedure was time consuming, and interfered with other health services. In my opinion the only immediate value that we derived from this program was informing the people about tuberculosis, finding 9 cases of adult tuberculosis, and possibly getting our public concentrated on the child instead of the adult.

In the group of 168 expectant mothers that were both reactors and X-rayed we found 12 active secondary and 10 observation cases of tuberculosis. The cases were placed in the Julius Marks Sanatorium and treated. At the time of delivery they were taken to a general hospital and delivered, and then returned to the sanatorium for further treatment, the infants being placed in the hands of relatives. Only one of these mothers failed to recover.

In the pre-school group of 75 reactors we found three primary active cases of tuberculosis and no secondary cases.

In the open case contact group of 2,700 reactors 1,700 were either examined, X-rayed or both and 201 active secondary cases were revealed, 55 cases were called observation and 46 primary active cases.

INCIDENCE OF SECONDARY TUBERCULOSIS PER 10,000

It is important to a health officer to know just what group local routine service should include, the reasons for this, and the chance of getting the goal at which he has pointed. If we take our experience in Mantoux testing, as a basis, and we wanted to know our chances of finding secondary tuberculosis among our own local population per each 10,000 we would look at such figures as these.

INCIDENCE OF SECONDARY TUBERCULOSIS PER 10,000 POPULATION

Items	Incidence
School Age	3.4
Pre-School Age	0.0
Maternal	332.0
Open-Case	624.0

In other words, based on this study and expressed as a ratio, the incidence of secondary tuberculosis per 10,000, Mantoux tests in expectant mothers is 100 times greater, and in open-case contacts 200 times greater, than in the child of school age.

From this study we feel that our meager staff of workers should concentrate more on contacts of known active secondary cases in the immediate homes in tuberculosis control concurrent with our many other family health problems, than to give Mantoux tests in our public schools and accumulate such a voluminous number of reactors, childhood and suspected cases that would upset a well balanced public health program.

We are aware of the fact that the most dangerous form of tuberculosis to a community is the open case; we are further aware that the individuals in the immediate vicinity of the open cases are in more danger to initial and continued infection than the school children in the general population. Then it would be indicated that the most effective way for a local health department to aid and protect the community would be to find and take out of circulation as fast as possible the open cases of tuberculosis, and not hamper this program with thousands of children who are reactors, and who during school age have had many possibilities of acquiring the infection other than the immediate home.

INVESTIGATION OF SECONDARY CASES

When a secondary case is made known to us, or is revealed by us, it is handled as all other communicable diseases are handled. There follows an immediate investigation from an epidemiological standpoint, all the contacts are Mantoux tested, and dependent on the financial status of the family, the reactors or suspicious cases are referred to the private physician or to the clinic. Those referred to the clinic may or may not be X-rayed, dependent on the clinician's decision. If a case is diagnosed clinically it is immediately reported to the health department for further observation and arrangement for sanatorium care. If the case is to be X-rayed and this constitutes the majority of contact cases, the health department refers them to the sanatorium. The superintendent of the sanatorium reads the films and reports the X-ray findings to the health department. If the X-ray indicates further observation, this is carried as a routine by the health department staff. The cases that are active are booked for the sanatorium by the health officer, and the superintendent notifies him when a bed is vacant. The condition of a patient at the time of admittance to the sanatorium is made known to the health officer. When the case is discharged the health of-

ficer is also notified of the time and condition of the patient. In this way there is close observation of all known cases both before admission and after discharge. This existing relationship between the health department and the sanatorium makes complete epidemiological observations.

Where we do have sanatorium facilities in Kentucky, the health department staff must rely on education in the immediate home, to family members and the cabin isolation method. In most instances if people realize the dangers from exposure to this disease they will follow out precautionary measures prescribed by the physician and the health department staff. In some of our rural counties pneumothorax stations are available to patients. The State Health Department has made possible a rotating X-ray service to rural county health departments. In many instances we experience non-cooperative cases, and for these the County Board of Health can, if they think advisable, quarantine. We are aware of the difficulties of quarantine, the most common being no county or state funds to supply food, clothing and shelter during the quarantine period.

In conclusion, I would like to point out that a health department considers tuberculosis as a communicable disease that can be completely eradicated from a local population. The degree of eradication would, in my opinion, be in direct proportion to the number of open cases put out of circulation. It is indicated from our experience that the most practicable use of the Mantoux test in the routine health service is in the immediate tuberculous home, followed by X-ray of the reactors, the expectant mothers, food-handlers and other limited clinic groups. We have found in our experience that the most effective type of education toward tuberculosis is through the public health nurse in the homes of families where routine public health services are carried out.

Male Hormone in Prostatic Hypertrophy.—

Cary is of the opinion that prostatic hypertrophy can no longer be regarded as an independent entity. The interrelationship between the testes, the anterior pituitary gland and the secondary sex organs are recognized and it is known that changes in one of these organs are inevitably conveyed to the other members. If this is true, it is possible that benign prostatic hypertrophy may be due to an endocrine imbalance. Testosterone propionate has been used in the treatment of twenty-six cases of prostatitis or prostatic hypertrophy. Only six patients failed to get any appreciable results. Testosterone propionate has been used in doses of 5 mg. and in every case the general tone of the patient was improved.

UTERINE BLEEDING*

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Louisville.

With the exception of the physiological hemorrhage occurring during the menstrual cycle uterine bleeding is a symptom of either a functional disturbance, some constitutional disorder, an organic disease, or a pathological lesion located in the pelvic organs. It is referred to as either menorrhagia or metrorrhagia. The former term, which is applied to an excessive blood loss at the normal menstrual period, may manifest itself by a change in the periodicity, quantity, or duration of the flow. In general, it is associated with benign conditions, the most common cause in the childbearing years being some complication of pregnancy. Disregarding this group, excessive menstrual bleeding is in young single women usually systemic in origin, while in older married women it is local. It should always be thoroughly investigated, for the incessant loss of blood, resulting in severe secondary anemias and lowered resistance to intercurrent diseases, represents alone a constant drain on the vitality. Metrorrhagia is intermenstrual uterine bleeding which is in no way related to the normal menstrual flow. While both constitutional and benign local changes may produce this symptom, it is a well recognized fact that the most common cause of irregular intermenstrual bleeding, particularly in women over 40, is the presence of a malignant lesion; consequently, a diagnostic operative procedure with a reliable microscopic study of the removed tissues is in all such cases absolutely indicated.

The most urgent single consideration in the management of uterine bleeding is to accurately establish the cause. In the history and general physical examination the following points require particular attention. The age at which menstruation first appeared is important because an early puberty usually means a late menopause and a delayed puberty suggesting lack of sexual vigor may herald an early climacteric. Full details concerning the quantity, duration, and periodicity of the flow, and its regularity during the years immediately following its establishment are essential if one is to recognize the menstrual flow normal to the individual patient and to correctly estimate pathological variations. Since excessive bleeding is a genuine manifestation of a pathological lesion, the amount of blood lost is more important than its duration. Under normal circumstances the menstrual flow is free from clots,

due to the fact that the blood is mixed with secretion and epithelium from the uterus and epithelium from the vagina. When clots are present, rapid and profuse bleeding is implied. The exact date of the last normal period when recorded establishes the date at which time the bleeding began and its significance. The true value of this point is appreciated instantly in the diagnosis of abortion and Ectopic Pregnancy. As regards the pelvic examination, upon which a correct diagnosis will always rest, there is with the exception of very young girls no contraindication. Blood studies help to evaluate the degree and seriousness of the anemia; and, if suspected, to eliminate some blood dyscrasia as the cause. If glandular dysfunction appears guilty, a basal metabolic rate assists in the collection of evidence. A diagnostic curettage is indicated in all cases of menorrhagia when the patient is above thirty and in all cases of metrorrhagia irrespective of conditions or age.

Bleeding from the uterus beyond that of the normal menstrual flow occurs as a symptom of varying importance in a wide variety of pathological conditions. Excessive bleeding appears at times in acute infectious diseases, such as pneumonia and typhoid; in chronic diseases, such as tuberculosis and cardio-renal lesions; in constitutional disturbances, such as the blood dyscrasias and hypertension; in chronic intoxications, such as alcohol and lead; and during severe emotional disturbances. Proper care in these cases consists in the diagnosis and treatment of the underlying disease, supplemented by the use of rest, drugs, and roentgen therapy as may be needed to control the bleeding. The menstrual disturbances that appear with tuberculosis and inflammatory diseases of the pelvic organs differ with each case and can never be utilized in evaluating the extent and severity of the infection. When present, the bleeding is due to pelvic congestion, endometrial hyperemia, and involvement of the ovary.

The treatment is built upon the utilization of such measures as will alleviate the pelvic inflammation; namely, rest, heat, and finally, when the pathological and general physical condition in each individual case permits, surgical intervention. Tumors of the ovary may at times cause bleeding which appears as some slight abnormality of the normal menstrual cycle. When such bleeding occurs after the menopause, the existence of granulosal cells in the tumor is suggested. Rarely, if ever, is severe hemorrhage caused by ovarian growths; and, in general, the more benign tumors of the ovary do not give rise to uterine bleeding. Surgical removal and

*Read before the Daviess County Medical Society, Owensboro.

identification of the growth alone protect the patient from the inseparable danger of malignancy.

As contrasted to these three groups in which uterine bleeding occurs as a symptom of secondary importance, there are many conditions in which it is of cardinal importance. These may be divided into functional bleeding, complications of pregnancy, and neoplasms.

Functional bleeding is that form of profuse menstruation in which there is no evidence of constitutional disorder other than a secondary anemia, no marked variation from the normal in size, mobility, contour, or position of the uterus, and no gross pathological changes in the tubes or ovaries. Microscopic examination of endometrial and ovarian tissue removed from such a patient shows two constant findings; namely, a hyperplasia of the endometrium and a predominance of follicular maturation without corpora lutea formation. In the light of our present knowledge of the physiology of menstruation these findings indicate a definite endocrine dysfunction. In the first half of the normal intermenstrual period esterone, the follicular hormone, acts upon the endometrium to stimulate proliferative changes, as is evidenced by increased vascularity, greater tortuosity of the glands, and hypertrophy of the uterine muscle. Then, during the formation of the corpora lutea, progesterone induces a secondary type of growth characteristic of the early days of pregnancy, quiets uterine contractions, and neutralizes all further follicular influence. In functional bleeding absence of progesterone allows of an unrestricted follicular hormonal influence, which simply means a constant hypertrophic, hyperemic endometrium. Patients suffering from this condition fall into three distinct groups, each of which is managed in a slightly different manner. In the last 100 consecutive cases of functional bleeding seen during the past 2 years 10 per cent of the patients were younger than 25 years, 27 per cent between 25 and 39 years, and the remainder, 63 per cent, 40 or older. The basic cause of the endocrine dysfunction in the earlier years of sex life, which is pituitary or thyroid deficiency, is treated by the elimination of all emotional strains, the administration of a diet rich in vitamins and proteins, the insistence upon an adequate amount of exercise, and the use of the proper hormones; desiccated thyroid, the Anterior Pituitary-like Gonadotrophic Hormone, and Antuitrin S. Progesterone, the hormone produced by the corpus luteum, is now available and constitutes the theoretically ideal treatment. Curettement is contraindicated in this group because it fails to influence the ovarian activity and especially

because of the possible deleterious psychic effect of such an operation on the impressionable mind of a young girl. If the hemorrhage be profuse, a vaginal pack and a transfusion will control the situation. While the results of endocrine therapy were far from satisfactory, the benefit derived from the use of hormones was limited almost entirely to this group. Of the 10 patients treated 3 were entirely cured, 5 benefitted, and 2 remained uninfluenced. In this latter group radium was required to control the persistent menorrhagia. Members of the second group who ranged in age from 25 to 40 had in many instances already received hormonal therapy. It is generally true that those individuals who develop functional bleeding after many years of normal menstrual life respond very poorly to the administration of hormones; probably because of such permanent structural changes in the ovary as cystic degeneration and fibrosis. Before attempting hormone therapy, these cases should first be curetted to definitely establish a diagnosis. For the reason stated above, immediately following the curettement we have applied radium in all cases of this group, the dosage ranging from 200 to 500 milligram hours. Since even small doses of radium may establish an undesired artificial menopause, a conservative attitude when using it is invaluable. Before the menopausal change in the 62 women over 40 was completed by the intrauterine application of 100 milligrams of radium for 20 hours, the diagnosis was previously confirmed by microscopic examination of the endometrium. All but one of these women whose sexual and reproductive age was practically over remained undisturbed by the early establishment of this change. While roentgen ray applications to the ovarian regions achieve results comparable to radium, since the cervix must be dilated it is our practice to utilize the latter immediately following the curettement. Hormonal therapy in this group obviously will fail. Hysterectomy in the treatment of uncomplicated cases is justifiable in but a single situation. If hormonal, roentgen ray, and radium therapy have all failed, rather than entirely destroy ovarian function in a young woman removal of the uterus should be performed.

The commonest causes of uterine bleeding during the span of active sexual life are those created by the complications of pregnancy. The bleeding associated with misplaced placentas, sudden premature placental separation, post partum atony, acute uterine inversion, and obstetrical injuries present obvious causes with accepted forms of treatment requiring no discussion. In a few cases of intrauterine pregnancy abnormal bleeding may persist until at the end of twelve weeks

when the decidual membranes and gestational sacs firmly fuse. These cases may go on to normal deliveries, may result in the death of the fetus, may terminate in abortion, or may undergo degenerative changes with mole formation and finally chorio-epithelioma. As long as the fetus lives, treatment consists in absolute rest, the use of sedatives, and the administration of progesterone. If the fetus dies or abortion appears inevitable, the uterus should be emptied. In cases of incomplete abortion great care must be exercised in emptying the uterus. The more recent the abortion the more gentle should be the evacuation, since perforation is an ever present danger. Blunt forceps or a sponge holder covered by gauze are used in place of the sharp curette; and manipulation is minimized since sepsis spreading throughout the pelvic organs constitutes the greatest single cause of death. In studying the last 100 consecutive incomplete abortions treated during the last 6 years 50 per cent occurred in people between 30 and 40 years of age, a history of induced abortion being given by only 2. 36 per cent gave a history of previous miscarriages and 61 per cent were aware of having missed a period. Although, in general, such abortions occur between the 8th and 12th week and discard in the cervical canal and vagina foetal membranes to mark their passing, in women who have gone through previous pregnancies an abortion may take place at the time of the regular menstrual period, declaring itself by uterine bleeding alone. In such instances diagnosis is established at the operating table. The hydatiform mole, a degenerative lesion of the placenta, occurs once in about every 2000 normal pregnancies. The patient who presents all the symptoms of pregnancy, amenorrhea, nausea, vomiting and swollen breasts—during the third or fourth month experiences a vaginal hemorrhage. The uterus is larger than it should be for the known month of pregnancy; and occasionally, clear grape-like bodies are passed. The treatment is dilatation and curettage with removal of the mole. The Aschheim-Zondek test should be repeated at regular intervals; and unless it remains negative, a curettage must be done, for from 5-15 per cent of all hydatiform moles are followed by chorio-epitheliomas. While curettage usually establishes a cure, all such patients require watching; and, if doubt arises, the case must be treated as a chorio-epithelioma. A chorio-epithelioma may follow an abortion, a full-time pregnancy, or, as already stated, a mole. It may occur either coincidentally with a mole or follow it weeks or months later; with ordinary abortions or advanced pregnancies it usually discloses its presence many months

later. Unfortunately, the symptoms are variable. There may be only abnormal bleeding, or pain, nausea, vomiting, and loss of weight. If uterine bleeding follows a mole, if material is extruded from a uterus at any suggestive time following a pregnancy, or if there is excessive and irregular bleeding following a pregnancy, this tumor should be considered and repeated Aschheim-Zondek tests performed. The concentration of anterior pituitary hormone in the urine is in hydatiform mole usually 3 times and in chorio-epithelium usually 7 times that of a normal pregnancy. In the last 800 consecutive hysterectomies there were 3 chorio-epitheliomas, 1 of which developed in a mole. Treatment consists in total hysterectomy and removal of the adnexa, to be followed by deep X-ray therapy. The uterine bleeding in ectopic pregnancy is scanty and irregular, not infrequently occurring for the first time when an expected period is due. It marks a stage of interference with the attachment of the growing ovum and of the unused decidua; and is most commonly observed between the 4th and 8th week of pregnancy. The bleeding, which is slight, directs attention to the condition, thereby facilitating early diagnosis and treatment. Removal of the offending tube promptly stops the bleeding. In the last 45 cases seen during the last 15 years a correct diagnosis was made preoperatively in only 66 per cent of the cases. There being no history of a missed period, no evidence of internal bleeding, and no acute lower abdominal pain even though a mass is detected in one of the adnexa, an accurate diagnosis rests upon the Aschheim-Zondek test. 63 per cent of these patients were between 30 and 40 years of age; and 50 per cent gave a history of previous normal pregnancies. While there were 2 deaths due to septicemia and acute yellow atrophy, it is of interest to note that shock, hemorrhage, and postoperative lowered vitality at least in this series contributed nothing to the mortality.

Following multiple pregnancies in the presence of small fibromyomatous tumors, in multiparous women with poor uterine tone, and subsequent to infection during pregnancy and after abortions, a uterus may not return to its normal state. A large boggy subinvolted organ sagging between relaxed ligaments is forced into a retroverted position. If uncorrected, intra-abdominal pressure aided by the weight of the abdominal contents will eventually produce some degree of prolapse. When the conditions which precede subinvolution are considered, the inevitability of infection, erosion, and laceration of the cervix is appreciated. Although intermenstrual hemorrhage of varying degrees

in severity is seen, the bleeding associated with this group is usually of the menorrhagic type. It is due to a mechanical interference with the venous return from the pelvic organs. The endometrium is constantly congested, the pathological areas in the cervix bleed almost when touched, and ovarian dysfunction is encouraged. With the exception of long standing subinvolutions and ovarian dysfunction, dilatation and curettage, repair of the cervix, and suspension will cure the bleeding. When bleeding persists following the indicated operative procedure, hormonal dysfunction is to be assumed; and other measures, selected according to the age of the patient, are to be chosen. If the patient is quite young, hormone therapy should be used; if in the middle period of active sex life, the intrauterine application of 100 milligrams radium for from 3 to 5 hours affords relief; and if over 40, either a menopausal dose of radium or hysterectomy, chosen according to modifying circumstances, is indicated. Whenever a large subinvolved uterus is seen in a patient who complains of distressing symptoms which are explicable on the basis of the mechanical displacement, a hysterectomy is usually the treatment of choice, because the radium which will stop the bleeding will not shrink the uterus sufficiently in size to relieve the patient of her sense of weight and pressure in the pelvis and of her backache. Retroversion, subinvolution, and prolapse are allied conditions which rarely occur alone; and their treatment with slight modifications is the same. As has already been stated, the bleeding seen with erosions, eversion, and lacerations of the cervix belongs to the metrorrhagic group. Repair of all cervical lesions should be routinely done in women over 35 years of age; because carcinoma in a healthy intact cervix is one of the surgical rarities, because about one-third of the cancers in women develop in the uterus and 90 per cent of these are located in the cervix, and finally because about 95 per cent of cervical cancers are seen in parous women.

The four neoplasms which commonly cause uterine bleeding are the polyps, fibromyomas, cervical carcinoma and adenocarcinoma of the uterine body. Polyps, depending upon their position and size, produce bleeding varying greatly in quantity. Many small polyps growing from the cervical lip are symptomless and are discovered during a pelvic examination. Those which develop within the cervical canal eventually become pedunculated and are liable to erosion, inflammation, and circulatory changes. If a long pedunculated polyp is sufficiently con-

stricted by the cervix, edema, hemorrhage, infection, thrombosis, and gangrene are to be expected. As contrasted to the cervical polyp which gives rise to metrorrhagia, uterine or endometrial polyps cause profuse menorrhagia, at times so severe as to create a pronounced secondary anemia. Two cases in the last 50 consecutive operations for cervical polyps required preoperative transfusions. 72 per cent of the cases were between 40 and 60 years of age; only 3 were single. With the exception of endometrial polyps an accurate preoperative diagnosis was established in all cases by the use of vaginal speculum. The treatment is excision of the polyp, cauterization of its base, and curettage of the uterus. While simple excision removes the polyp, the curettage is required to eliminate the possibility of other endometrial polyps, fibromyomas, hyperplastic endometrium, and adenocarcinoma of the body. Microscopic examination of the removed tissue alone will guard against the malignant change found in 1 per cent of all polyps. Of all lesions affecting the female pelvic organs the fibromyoma is the most common, this tumor being the indication for 62 per cent of our last 800 consecutive hysterectomies. It is seen about evenly in single and married women and in the majority of instances forces the patients to seek relief between their 35th and 50th year. All fibroids do not cause bleeding. In fact, some of the largest tumors are symptomless. Recently tumors weighing 8 and 12 pounds were removed from single women who complained only of the fact that their friends believed them pregnant. When bleeding does occur, it results from either endometrial congestion caused by misplacement of the organ, congestion initiated by pressure, changes in the endometrial capillaries in submucous growths, and ovarian dysfunction. Treatment consists either in surgical removal or the application of radium. Surgery is in general the safest and surest treatment providing the patient's condition is satisfactory. It should be the one of choice in submucous, large, and multiple tumors. Tenderness, pressure, infection, and degeneration are additional indications. Myomectomies should be reserved for those cases in which preservation of the child-bearing function is desired and in which the patient clearly understands that other tumors are to be expected. Radium is very satisfactory in women who are approaching the menopause, providing the tumor be no larger than a 3 months pregnancy. Roentgen therapy is just as acceptable if the diagnosis is so clear that a curettage is not required. In our last 43 cases of adenocarcinoma of the

body fibroids were present in 15 instances. When judiciously employed in selected cases radium and roentgen therapy are curative. Careful consideration must, however, be given to the patient's age, the size and position of the tumor, the condition of the pelvic organs, the degree of anemia, and especially the dependability of the clinical diagnosis. Carcinoma of the cervix occurs almost always in a diseased cervix, the patient's age being usually between 40 and 50. Characteristic is the intermenstrual bleeding which is very slight in the early localized growth. Direct extension into the parametrial tissue is found in from 3 to 8 months after the first symptoms appear. Identification of the tumor is achieved by palpation, inspection, and biopsy, the microscopic examination being the only reliable method when the growth is small. Of the 15 carcinomas of the cervix seen during the past year all were 42 years or older. All had passed through at least one pregnancy, and only 4 were so fortunate as to have the lesions restricted to the cervix proper. These 4 were diagnosed by biopsy. If in the light of our present knowledge there is to be an increase in the cures of carcinoma of the cervix, it must result from earlier diagnosis. And earlier diagnosis means more frequent biopsies. Treatment of cancer in this location by radium is now accepted as being most desirable. The blood loss, trauma, prolonged anesthesia, and high mortality incidental to the radical operation are avoided and the ultimate results achieved are equally as good if not better.

Carcinoma of the body makes up 10 per cent of all cancers of the uterus and occurs most frequently either at or later than the menopause. Although, as in cancer of the cervix, there is no time limit for its appearance, 75% of our last 44 cancers of the body developed in women between 48 and 65 years of age. The bleeding is very slight. At first it amounts to only an occasional few drops; later, a definite hemorrhage may occur. The tumor grows slowly and metastasizes late; consequently, a large number of these cases are permanently cured. Diagnosis rests entirely upon the microscopic examination of tissue removed from the uterine cavity. Surgical removal of the uterus and adnexa is the procedure of choice.

In conclusion uterine bleeding may be caused by many diversified pathological lesions as well as by hormonal dysfunction. Since it is a symptom of varying importance and not a disease, the most important single consideration in the handling of such cases is the establishment of an accurate diagnosis. This is achieved in each instance by a rou-

tine history and general physical examination, with particular emphasis on the details of the menstrual period and on the condition of the pelvic organs. A satisfactory pelvic examination represents the cornerstone on which a diagnosis must be built; without it a diagnosis is nothing but an impression, no more safe than a house raised over quicksand. The fact that most cases, excepting young women with functional bleeding, fall within the decades of life when cancer is most commonly seen has been emphasized and the urgency for microscopic study of tissue removed from these patients stressed. Accurate diagnosis is not only essential to successful treatment; but what is more important it is essential to the patient's safety. Once established the appropriate application of medicine, hormones, surgery, radium, or roentgen therapy alone or in combination can be intelligently directed.

ECLAMPSIA*

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The dreaded sequellae to a late toxemia of pregnancy is known as eclampsia, and in this group of cases we find a high percentage of maternal mortality and even higher percentage of fetal mortality. The cardinal indications for various obstetrical procedures are always the welfare of the mother and the welfare of the fetus, but eclampsia is one condition where the welfare of the mother is the sole consideration, and for the baby only hope. Fortunately I have encountered only three eclamptics in private practice, and two of these lived, but I dread the thought of another case as much or more than I did the first one. I feel that one of these cases was due to my error in judgment in not terminating labor prior to term, the other two were not seen before the onset of labor and convulsions. If all of our prospective mothers could be taught that careful prenatal care is as important, and in my own humble opinion more important than the management of labor, the incidence of eclampsia would be lessened tremendously.

The precursor of eclampsia is known as pre-eclamptic toxemia and it is here that we may do our best work in regards to treatment, namely prevention. Pre-eclamptic toxemia is characterized by headache, dizziness, spots before the eyes, pitting edema of the lower extremities, and elevation of blood pressure, particularly the diastolic pressure. The first sign of danger in the pre-natal pe-

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riod is a rise in the diastolic pressure, the danger line being at 90 mm. of mercury. The danger point in rise of systolic pressure is 140 mm. of mercury. A moderate rise in the systolic with a normal diastolic pressure is not alarming and is frequently found in a normal pregnancy.

The beliefs of the actual cause of eclampsia are as varied as the many ideas of the causes of depression and the proper remedies of the same. I will not attempt to take up the etiological factors in detail, but will merely give the general groups into which they fall, namely:

- (1) Bacterial causes.
- (2) Maternal causes. (a) Dieting; (b) Intestinal; (c) Metabolic changes; (d) Endocrine disturbances.
- (3) Fetal causes. (a) Biological reactions; (b) Entrance of fetal elements for fetal metabolic products into maternal circulation.
- (4) Placental causes.
- (5) Physiological chemical changes.

In 1843 Lever proposed the hypothesis that eclampsia was due to acute uremia. This seemed logical in view of the markedly decreased output of urine during the pre-eclamptic state. However, it was found at autopsy that about 7 per cent of the cases showed no kidney lesions, hence the fallacy of uremia as the cause of eclampsia. The bacterial causes were variously described as infected placental infarcts, and infections of the urinary tracts, yet in Siam eclampsia is practically unknown in spite of the prevalence of dental and urinary infections. During the World War the incidence of pre-eclamptic toxemia was much reduced in Germany when the food blockade was the severest. This has been argued to be the result of increased labor and loss of body fat on the one hand and to the decreased intake of protein on the other. In support of the latter theory the low incidence of eclampsia in Siam is held up, in as much as the diet there is almost entirely vegetarian. Also the low incidence of eclampsia in the patients who have had adequate pre-natal dietary advice lends some weight to this contention. Yet if it is due entirely to the dietary and elimination disturbances, why should not toxemias similar to pre-eclamptic toxemia occur in the non-pregnant woman as well. Some believe that congenital hypothyroidism to be the cause, also hyperfunction of the hypophysis and suprarenal glands due to ovarian insufficiency. Then there is the theory that over production of corpus luteum is the causative agent. As we can see we have run the gamut of the endocrine glands with various investigators blaming the catastrophe on each and all of them, and none of their suppositions

conclusive. The claim that fetal toxins entering the blood stream is the cause of eclampsia is uncertain when we consider that eclampsia may occur with hydatidiform mole as well. Again the physiologic chemical causes advanced as the cause of eclampsia, although plausible, are involved in multiple controversies with the works of some investigators absolutely contradicted by that of others. No doubt all of the factors mentioned are included in the true cause of eclampsia, but a rational quantitative analysis of their individual roles is still to be worked out. We do know that eclampsia occurs more frequently in the primiparae than in the multiparae. Also it is more prevalent in cases of hydramnios and multiple pregnancies and we are sure that adequate prenatal care results in a lowered incidence of its occurrence, but why all these are true is still an unknown quantity.

Although I previously mentioned the symptoms and findings of pre-eclamptic toxemia, one or more of which usually makes itself manifest to the patient before onset of convulsions, there are not a few cases which give no warning in way of prodromal symptoms to the patient and she may be suddenly taken with a convulsion. The patient may be walking across the floor or lying in bed asleep and suddenly become unconscious with an accompanying convulsive seizure. In either case the onset of convulsions is sudden and typical in character. The clonic seizures of the musculature of the face and the extremities are accompanied by a frothing at mouth which is often bloody from chewing the tongue. The eyes are staring, usually with dilated pupils. Following the clonic seizures a tonic rigidity may be present for a lesser length of time. During the clonic stage the breathing is either shallow or absent, and following this it becomes deep and labored. Cyanosis is usually present in varying degrees, and involuntary urination and defecation more often present than not. The pulse is rapid and a rise of systolic and diastolic pressure is encountered, the former higher relatively than the latter. Due to a change in the thermal center from change of intracranial pressure the temperature will rise from 2 to 5 degrees. After a seizure the patient is in a comatose condition, which will be interrupted by successive convulsions. The interval between convulsions is usually a matter of minutes, but occasionally there may not be a recurrence following the first convulsion for days and even weeks. With an increase in the number of convulsions there is a corresponding increase in their severity. Convulsions most frequently occur after the eighth month of pregnancy, but I saw a case

of another doctor's once where they occurred in the fifth month. About 55 per cent of the cases occur before the onset of labor, and the other 45 per cent are about equally divided between those occurring during labor, and in the puerperium. Frequently the convulsions will throw the patient into labor. Those that occur during labor, usually end with labor's completion, and postpartum convulsions rarely occur later than 24 hours after delivery. Unless controlled, and the uterus emptied speedily, these patients will become deeply comatosed, and the respiration more labored, the pulse uncountable, the temperature increasingly higher, and then death to the mother and fetus. Other conditions may cause convulsions at this time, such as epilepsy, uremia, apoplexy and even hysteria, but these can be easily differentiated as a rule and must be to make a definite diagnosis of eclampsia. The highest death rate occurs in the prepartum cases and the lowest in intra-partum ones. Death in convulsions may occur from cardiac failure, pulmonary edema, and cerebral vascular injury. Those who survive are usually very susceptible to infection, and not infrequently will develop a pneumonia from aspiration of materials during the seizures.

The pathology of eclampsia lies chiefly in the liver, kidneys, brains, lungs, and heart. There is considerable argument as to the exact pathology in both liver and kidneys, but in general there seems to be destruction in the portal vessels with degeneration of the adjacent hepatic cells, and in the kidneys the lesion is predominately glomerular, although the tubules are affected to a lesser degree. Degenerative changes occur in the heart muscle. These vary from cloudy swelling to fatty degeneration. Frequently the lungs are normal, and the pathology, when found is that of acute pulmonary edema. Edema of the brain with accompanying anemia may be found, or there may be merely a simple hyperemia, areas of thrombotic hemorrhages, or even large hemorrhagic areas.

I now turn to the phase of this subject that concerns us as practitioners most, namely treatment. I want to dwell mostly on enforced treatment in the home, which we here have to face because of our many isolated cases. Of course, if possible, the patient should be moved to a hospital, but in my discussion I will stick to the management of cases that must be treated in the home. First we start out handicapped for several reasons. In the home we do not have the facilities available to our urban colleagues who are treating these cases in the hospital. Then we have a hysterical family and group of

close friends who always come in for the show. This last group of morbidly curious are worse than a bunch of bar flies during a normal spontaneous delivery, but in the case of eclampsia, they must be the curse placed upon us physicians for our previous sins. First of all we must clear the room of this unnecessary refuse, and if we are fortunate enough to have a nurse with us, allow only her and one other sane person in the room to run errands. Eclampsia is an emergency and requires immediate action. The underlying principle for all treatment is sedation and elimination. Naturally control of the convulsions is the first consideration. In numerous centers the Stroganoff routine and modifications are in vogue. I have seen only three cases of this treated in this manner and they all died. I do not believe that the morphine and chloral in the Stroganoff routine is sufficient to control the convulsions in a reasonable length of time. I prefer the use of sodium amytal intravenously in dosage varying from 7 1-2 gr. to 15 gr., depending upon the duration of the convulsions and their severity. Both as a student and as a practitioner I have seen the convulsions cease before the administration of the drug was complete, and always in at least 5 minutes following the completion of its administration. Prior to administration of the drug, a gag of tongue blades or a clothespin should be inserted cross-wise in the mouth to prevent biting of the tongue. After the convulsions have been controlled our attention should next be turned to an attempt at lowering blood pressure, increasing urinary output, and emptying the uterus. If labor has had its onset prior to the onset of convulsions, or if the seizures have initiated the onset of labor, allow the labor to progress of its own accord. In the meantime the patient should be given at half hour interval 50 per cent glucose intravenously and either 10 per cent magnesium sulphate intravenously or 25 per cent sulphate intramuscularly. I prefer the latter as it saves the veins from so many punctures, which would cut down the chance for further treatment. Hot magnesium sulphate enemas at about the same regularity will also be beneficial. Glucose tends to lower the blood pressure, and here also aids the regeneration of the damaged liver cells. The magnesium sulphate acts both to lower the blood pressure and as an added sedative measure. The hot enemas aid in the lowering of the blood pressure. With lowered blood pressure we have a corresponding drop in intra-cranial pressure, and cessation of convulsions. If the patient is well enough controlled and is responding to treatment and the

progress of the labor is normal, I believe that she should be allowed to go on to a spontaneous delivery but if it is being prolonged too great a time, due to uterine inertia, or to a large fetus that is having difficulty getting through the pelvis, then I think that as soon as dilatation is complete, or even after manual dilatation, the baby should be delivered by forceps or version, according to which procedure the physician feels himself better qualified to do. In cases where there is an absolute disproportionment between the fetus and the pelvis, section will have to be resorted to, and in some of our localities this will have to be performed in the home. It has not been many years since, in isolated rural communities, all acute abdomens and sections were done in the home, and the mortality and morbidity rate compared very favorably with those that were hospitalized. I believe, however, that in either home or hospital, delivery below, if possible, is preferable to section.

The administration of 50 per cent glucose can best be done by giving it in 50 c.c. amounts. I say this because a 50 c.c. Luer is about the largest syringe we can get. In a hospital we can set up a flask and give 100 c.c. at a dose. Intramuscular injections of magnesium sulphate are usually given in 15 c.c. amounts or if you prefer intravenous injections, 20 c.c. of 10 per cent is usually given at a dose. In cases where the onset of labor has not taken place, it should be induced as soon as possible, by the most convenient method. Manual dilatation of the cervix with insertion of a bag is probably the best method. If unsuccessful the possibility of section must be considered or the more conservative method of sedation and watchful waiting for onset of labor resorted to. Stroganoff advocated an ultra conservative treatment, and unless labor was actually in progress made no attempt to empty the uterus. His mortality rate, as given by him, is very low, but in checking his reviews of cases one will find that he included as an eclamptic all cases whose blood pressure was above 140-90.

As stated early in this paper, our most efficacious treatment is prevention. This can be accomplished by adequate prenatal care. Obstetrical reviews show that the incidence of eclampsia in any group of patients who had good conscientious prenatal care is low. That means a monthly check-up of blood pressure and urinalysis, along with the other usual things considered with prenatal care. Of course our dietary advice may go to naught if the patient does not cooperate, but if we try hard enough I believe we can con-

vince them of its importance. Marshall Field once established a motto for his business that the customer is always right, I am afraid that we physicians, and I am as guilty of it as anyone, have accepted this motto. If our patients do not see the necessity of regular prenatal check-ups, we are inclined to let them have their own way. Once a late toxemia is found, by proper treatment we can, most of the time, avoid eclampsia.

My idea of the proper treatment of eclampsia may brand me as one with radical tendencies. Also this manner of treatment may be argued against as too radical for treatment in the home. Yet I personally have observed such better results from the so-called radical treatment that I cannot help but think it is the method of choice. The fact that our lowest mortality occurs in those cases where labor has already begun, seems to me a rather conclusive argument for immediate emptying of the uterus. I believe that if a patient does not respond to treatment in a pre-eclamptic toxemia, her pregnancy should be terminated regardless of the month of gestation.

In closing I wish to make a plea for a more concerted effort on the part of all of us in convincing our patients the necessity of regular prenatal check-ups. Luckily most of our deliveries are uncomplicated as far as toxemias are concerned, but it is this high per cent of normal cases that make the lay public look upon childbirth in such a casual manner. It is up to us to make them realize the seriousness of childbirth, we owe it to them and to ourselves to do this.

Implantation of Ureters into Rectum.—Nurnberger describes the histories of two cases of vesicovaginal fistulas in which he resorted to implantation of the ureters into the rectum according to the Coffey-Mayo method. Both patients died. Discussing these cases, the author directs attention to annual experiment by Reimers and to clinical observations made by Mikulicz-Radecki and Krauspe, which indicate that the implantation of the ureters into the rectum not only is likely to aggravate an existing infection but may also prepare the way for new ascending infections of the urinary tract. He concludes that operations for vesicovaginal fistulas always involve risks, which are especially great in the rectal implantation of the ureters.

THE METABOLISM OF CARDIAC MUSCLE*

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It is no longer necessary to apologize to a clinical group for a purely academic discussion of physiological problems. Nothing marks more surely the advancement of medicine than the recognition of the need for joint action by clinical and experimental groups on fundamental problems. The basis for such joint action is an active interchange of ideas, not after the finishing touches have been applied, but at the earliest stages of their development. This need constitutes the only apology that I shall offer for presenting material from which, at the present, very little can be gleaned which appears to be clinically applicable.

It is a relatively simple matter to determine the oxygen consumption, the carbohydrate consumption, the carbon dioxide production or the heat production of a slice of heart muscle cut from the frog, the turtle, or the dog. It is only a little more difficult to remove the heart of a dog or a rabbit, and to insert it in an artificial circulation, so that it continues to function as a pump for the defibrinated blood or Ringer's solution in the system. And the metabolism of such an isolated working heart may be studied without difficulty. From studies of both types much has been learned. Heart muscle is peculiarly fitted for the unceasing performance of mechanical work by certain unusual features of its metabolism. It is tempting to speculate upon the importance of a breakdown in the metabolism of heart muscle in the various types of circulatory failure. This is much more profitable as a field for work, however, than as a field for speculation, since it is impossible to transfer the data on isolated hearts studied under highly abnormal conditions to the heart *in situ*. A start has been made on such studies, particularly on the diabetic heart. The results of such studies, thus far, have been of considerably more significance for an understanding of the details of metabolism themselves, than for an understanding of normal and pathological heart mechanisms. The isolated diabetic heart is a surprisingly efficient and normal heart, even though its metabolism is quite different from the normal. Even though it calls upon new sources for its energy, its efficiency as a machine seems unimpaired. Indeed, the isolated heart functions reasonably well under such a wide variety of conditions that it may be necessary to conclude, when all the data are

in, that cardiac abnormalities in the metabolic disorders are entirely secondary to the vascular changes.

Like other muscle, heart muscle is a machine for converting chemical energy into mechanical work. Although the immediate energy conversion is anaerobic in heart muscle as well as skeletal muscle, the energy for the work of the heart is ultimately derived from oxidation of foodstuffs. The oxygen consumption of the heart thus serves as a convenient index to the amount of chemical energy liberated. In skeletal muscle, the work done by the muscle may be computed from the familiar work formula, weight times distance. That is, as the product of the weight moved by the muscle times the vertical distance through which it is lifted. Most of the work of the heart is done in overcoming the resistance to outflow from the ventricles, that is, against arterial pressure. The weight times distance formula becomes therefore, in the case of the heart, the volume of blood expelled times the mean arterial pressure. To this must be added the work done in imparting velocity to blood, which, with small cardiac outputs, amounts to only about 1 per cent of the total work, but with large outputs as much as 50 per cent.

The human heart, with the subject at rest, does about 300 kilogram meters of work per hour, or enough to lift a man of average weight a vertical distance of about sixteen feet. During maximum exertion the human heart works at the rate of about 9000 kilogram meters per hour, or enough to lift the average man a vertical distance of more than 400 feet. In the performance of these surprising amounts of work the heart is not particularly efficient as a machine. That is to say, considerably more energy is liberated than appears as mechanical work. Judging from the oxygen consumption of the isolated dog heart working under basal conditions, only about 6 per cent of the total energy spent is converted into work, the rest being lost as heat. The mechanical efficiency of the heart is thus only 6 per cent under these conditions. The steam engine may have an efficiency as high as 25 per cent, and skeletal muscles working under optimum loads a similar efficiency rating. Normally, however, as cardiac output increases during exertion, the mechanical efficiency increases, one worker finding values as high as 30 per cent with large outputs. Conversely, when the isolated heart is brought to a standstill, so that no mechanical work is done, its metabolism, as judged by its oxygen consumption, remains at a rather high level, something like 50 per cent of the minimum level while working. In skeletal muscle, in con-

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trast, metabolism drops to a very low level unless the muscle is worked. A comparison of the two types of muscle would suggest that only a relatively small part of the energy consumed by the heart is used for the heart beat, a relatively large part for its own intrinsic needs. The energy requirement of the human heart with the subject at rest as during determination of the basal metabolic rate probably accounts for about 8 per cent of the total energy liberated.

Although under ordinary circumstances the mammalian heart takes up oxygen from the blood at a rate which is roughly proportional to the work done, it, like skeletal muscle, is endowed with the capacity of working for some time in the absence of oxygen. When perfused with defibrinated blood the isolated heart of the dog continues to maintain its normal output for as long as twelve minutes after substituting nitrogen for oxygen in the oxygenators. The resistance of the frog's heart to anoxia is even more striking. It will continue to beat in the absence of oxygen for about one hour in ordinary Ringer's solution, and when arrested, will recover in the absence of oxygen if alkaline buffers are added. Katz and Long have shown that the mammalian heart, in the absence of oxygen, will stop beating when lactic acid has increased about $2\frac{1}{2}$ times. Skeletal muscle is more resistant to lactic acid, since it stops responding to stimulation only after its lactic acid has increased some 4 1-2 times.

The ability of both the heart and skeletal muscle to do work in the absence of oxygen is dependent upon the breakdown of carbohydrates in the tissue. When supplied with ample oxygen, the heart takes up almost no glucose from the blood, and uses practically none of its content of glycogen. Thus the heart of the dog may be isolated in an artificial circulation and beat for five hours without appreciably reducing the total carbohydrates of the system. This is in striking contrast with skeletal muscle, which reduces either its own glycogen stores, or the blood's glucose content as it works. In the absence of oxygen, however, the glycogen content of the heart rapidly disappears, and it begins to remove appreciable quantities of glucose from the blood. The heart of the frog can be kept beating for hours in the absence of oxygen if glucose is added to the Ringer's solution, and the solution is well buffered against acid. The carbohydrate stores of the heart, as glycogen, and the glucose of the blood, thus represent the reserve energy upon which the heart can draw in the absence of oxygen. The glycogen content of the heart is about the same as that of skeletal muscle, something like 0.5-0.6 per cent of the total weight. The glycogen of the heart, however, does not rise

and fall with the glycogen of skeletal muscle. Thus, in pancreatic diabetes and in starvation, as the glycogen of skeletal muscle is reduced, the glycogen content of the heart is increased.

The skeletal muscles of mammals have to draw on carbohydrate stores when working for the reason that they are unable to resynthesize to any large extent the carbohydrate which is broken down into lactic acid. The lactic acid which is formed diffuses for the most part into blood, from which it is removed by the liver, the heart, and the brain. In the latter organs the lactic acid is either burned directly for energy production, or converted into glycogen and stored. Thus, heart muscle takes up, and uses as a source of energy, the waste product which is thrown off by skeletal muscle. Whereas skeletal muscle takes up glucose from the blood and throws off lactic acid, the heart takes up almost no glucose from blood provided it is supplied with lactic acid. The advantage to the animal is obvious, since the source of energy which the heart uses the most readily is most plentiful during skeletal muscle activity, at the time when the demands on the heart are greatest. Furthermore, lactic acid causes dilatation of the coronary vessels, so that the mere presence of this food in the vascular system insures its own utilization by the heart.

Lactic acid serves as a source of energy for the heart only in the presence of oxygen. In the absence of oxygen the heart breaks down its own and the blood's stores of carbohydrate, and produces lactic acid in the same manner as skeletal muscle.

The oxidation of carbohydrate and lactic acid probably accounts for only a little more than half of the energy of the heart beat. Even when all the lactic acid and all the carbohydrate which an isolated heart has removed from the system are added together, it is found that only about 60 per cent of the oxygen used is accounted for. It seems likely that the remaining energy is derived from oxidation of fats stored within the heart.

Until about ten years ago it was thought that carbohydrate breakdown furnished energy directly for muscular contraction. It now appears that carbohydrate breakdown is only indirectly related to the contraction, since muscles poisoned with moniodoacetic acid lose their ability to break down carbohydrate without losing the ability to contract. The chief immediate source of energy is the hydrolysis of phosphocreatine into creatine and phosphoric acid. Unless energy is applied to the system from some other chemical reaction, however, the supply of phosphocreatine is soon exhausted, and muscular work ceases. By drawing on other reactions for energy,

the muscle is able to re-synthesize the phosphocreatine from the creatine and phosphoric acid, and so continue to work almost indefinitely. The heart contains somewhat less phosphocreatine than does skeletal muscle, but it draws energy from other reactions so effectively that even when isolated it beats five or six hours without any reduction in the phosphocreatine content. If poisoned with moniodoacetic acid to prevent carbohydrate breakdown, it must be supplied with ample oxygen. Presumably, it oxidizes stored fats under these conditions. The ease for utilization of amino acids is not so convincing. If oxygen is withheld from such a heart, it beats at most about 100 times, after which its store of phosphocreatine is exhausted, and it stops.

The adjustment of the metabolism of the heart to the amount of work which it is required to do is a nice one. Starling showed in 1915 that, within limits, an increase in the resting or diastolic length of heart muscle fibres is accompanied by an increase in the mechanical work done during contraction. Simply stretching heart muscle has been shown to increase its oxygen consumption. This is probably the chief mechanism which permits adjustment of metabolism to work required. There is no experimental evidence that the failing heart fails because of insufficient energy liberation. It fails because the energy which it liberates cannot be converted into mechanical work. It is useless, on the basis of what is known, to attempt to improve cardiac efficiency by supplying the heart with more fuel, or with fuel which is more readily utilizable, since the cause of heart failure is probably never found in this category. It is entirely rational, on the other hand, to improve the working conditions of the heart so that its already sufficient metabolism may result in the performance of greater amounts of work. Such an attack hits directly at the only condition in which the nutrition of cardiac muscle is likely to suffer, that is, reduced coronary circulation. The supply of blood to the heart muscle, rather than the energy value of the blood, is probably the limiting factor.

THE ATHENIAN OATH

"We will never bring disgrace to this, our city, by any act of dishonesty or cowardice; we will fight for our ideals and sacred things of the city, both alone and with many; we will revere and obey the city's laws and do our best to incite a like respect and reverence in those about us; we will strive unceasingly to quicken the public's sense of civic duty; and thus in all these ways we will strive to transmit this city not only not less but greater, better, and more beautiful than it was transmitted to us."

TULARAEMIA

L. H. SOUTH, M. D., Louisville

Tularaemia is caused by the *Bacterium Tularensis*, which is very common in wild rabbits, hence it is called Rabbits' disease.

The germ was discovered by McCoy and Chapin in 1912, as the cause of fatal epidemic in ground squirrels in Tulare County, California. The disease is named after that county.

Wild rabbits are the principal animals affected and are the chief source of disease in man. It is usually transmitted to man as the result of skinning, dressing or otherwise handling rabbits. The disease is not readily transmitted from man to man. The period of incubation is from two to five days. It may be as short as one day and as long as nine days.

SYMPTOMS: In most cases an ulcerating sore develops at the point of infection, which is most often on the hand; the lymph glands, which drain the infected region, become enlarged and tender. Thus, if the infection is on the hand the glands of the axilla become enlarged.

One type of the disease resembles typhoid fever. In these cases the fever may be of an irregular type, and there may be no skin sore nor enlarged lymph glands. In cases of eye infection, there is marked conjunctivitis with tenderness and enlargement of the glands in the neighborhood of the ears and neck.

The onset may be sudden, often occurring while the patient is at work, characterized by headaches, vomiting, chills, aching pains, sweating, prostration and fever.

In the glandular cases, there is pain in the area of the lymph glands, which drain the site of infection, the glands become enlarged and tender and may break down, liberating a necrotic core leaving an ulcer. Weakness, loss of weight, chills, sweats and prostration, which often lasts for two or more weeks, are common symptoms.

DIAGNOSIS: Errors in diagnosis occur in cases which simulate typhoid fever, influenza, septic infection and glanders. In a person who has dressed and prepared rabbits, as in the case of a market man or house servant, and who develop inflamed glands of the cervical, epitrochlear or axillary regions, accompanied by fever and marked illness, tularaemia should be borne in mind. These cases usually develop in November, December and January, when rabbits become an article of food.

The final diagnosis is confirmed or made by the laboratory. Approximately 3 to 5 cc of blood should be obtained in the same manner as for a Wasserman test for laboratory examination during the second week of the illness. As this is an agglutination test, the reaction is not present until that time.

EDITORIALS

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NEXT MEETING: BOWLING GREEN

MESSAGE FROM THE PRESIDENT-
ELECT

According to custom and prompted by the Editor, I have the pleasant privilege of extending a New Year's Greeting to the members of the Kentucky State Medical Association. May the New Year hold in store for you all that is good.

For the present my task as President-Elect is twofold: to prepare myself for the office of president and to see to the preparation of a scientific program. The splendid record that Dr. Gardner is making as your President serves as a precept to me and, at the same time as an example difficult to equal. He has insisted on the prime importance of professional personnel in the care of the State's insane, not being satisfied with a building program, and notable has been the success of his committee advisory to the Department of Welfare of the State. At last it seems that the mentally ill wards of the State are to be cared for by those trained to treat such diseases. The declared intention of the Governor to be guided by the medical profession in medical matters gives promise of better things. Would that Washington had the same point of view!

One thing I am particularly charged with and that is preparation of a program for the scientific session at Bowling Green. I am glad to say that Dr. Charles N. Kavanaugh of Lexington has consented to be our program chairman and that Dr. Louis Hamman of Baltimore will be the chief speaker at one of the evening meetings. The program, like that of the last meeting, will provide only a sufficient number of essays to permit free discussion, not limited to those named on the program.

Many of you will remember that at the last Bowling Green meeting when I was program chairman, the scientific program was divided into a medical and surgical section, the programs of both of these being designed chiefly for the general practitioner who, of course, covers both fields. There are striking advantages in this plan; notably two. It affords opportunity for nearly twice as many papers and gives the members choice at all times of two of these. The objectors at that time were very vocal. These consisted, in part, of those who preferred to address their "clientele" rather than their "competitors," losing sight of the fact that under the usual plan there would have been only about half of the essayists to address anybody. Favorably as I think of it, this will not be repeated at the coming session unless the demand for it is much stronger than I think is possible.

Another matter concerning the program I

wish to present to you. In recent years in two of the associations that I am most familiar with, namely, in this and in the Southern Medical Association, there has been a growing tendency on the part of those appointed to discuss papers, instead of doing this, to read a sort of shorter essay on the subject. The effect of this, I submit, falls far short of the crisp and stimulating interchange of ideas which is the purpose of discussion and which goes far toward making a scientific session interesting. From those who are infrequent speakers any kind of presentation they select will be welcome, but it is hoped that as far as possible, discussants will tell us, and not read to us, their comments on the essays in question.

With the hope that you will not get the impression that you are going to have a troublesome president and assuring you that your wish in all things pertaining to the Association will be my law, again I wish you a Happy New Year.

JOHN W. SCOTT, M. D.

DR. McCORMACK HONORED

The Southern Medical Association added another merited honor to the list already attained by Dr. A. T. McCormack when, at its recent meeting in Oklahoma City, it made him its president-elect. Dr. McCormack in October completed his term as president of the American Public Health Association, an honor which came to him in recognition of his distinguished service in the field of public health and preventive medicine, wherein the personnel comprises many technical workers other than physicians. The membership of the Section on Public Health of the Southern Medical Association is limited to physicians, all of whom were experienced practitioners before becoming health officers; they consequently possess an understanding and an approach to the problems of medicine today in advance of those without such practical knowledge and experience. The membership of the Association as a whole, comprised solely of practitioners of medicine and its specialties, have paid a tribute to Dr. McCormack as a physician eminent in his specialty in bestowing upon him this evidence of their trust and confidence. Second in size only to the American Medical Association, the membership of the Southern Medical Association is derived from the sixteen Southern States, its efforts being devoted entirely to the betterment of the art and science of medicine. The programs of its sixteen sections are of such excellence as to attract the best minds of the Southland to their deliberations. The record of the Association is one of construc-

tive worth. With a fortitude developed from the accomplishments of the past, the Association, under the leadership of Dr. McCormack, stands ready to salute a more splendid future.

IRVIN ABELL, M. D.

THE BOWLING GREEN MEETING

The 1939 scientific program of the Annual Session of the Kentucky State Medical Association, which will be held in Bowling Green next September, is timed to begin very early planning. Dr. John W. Scott, President-Elect, is also Chairman of the Committee on Scientific Work, the other members of the committee being Dr. Charles N. Kavanaugh of Lexington, and Dr. A. T. McCormack, Louisville, ex-officio member.

Dr. Scott will ask that members write him at the earliest possible moment, the subjects in which they are interested and upon which they can prepare and read papers, subjects that will interest this graduate assembly of physicians of Kentucky, for that is really what our scientific sessions are.

It is unnecessary to remind our members that each is equally responsible for the success of this Association, both in the scientific and general service program. To this end, we trust you will accept Dr. Scott's invitation to write him frankly as soon as possible the subjects you have that will make the program more beneficial to the profession and to the people we serve.

A CHALLENGE

A quarter of a million lives could be saved each year according to Surgeon General Parran through the general use of thoroughly proven methods of fighting preventable diseases and deaths. What he suggests is merely to make medical knowledge we already possess more universal and more practical in its application so that every diseased person can receive such treatment that he will not transmit his disease to his healthy neighbor.

The story of syphilis reveals the tragic toll exacted by this inaccessibility of medical knowledge, a disease whose cause is definitely known, its method of transmission common knowledge, its cure even the lone doctor on the out post of civilization is familiar with, yet 45 million dollars are yearly spent on the care of the syphilitic blind and insane alone. The fight against communicable diseases is a totalitarian war in which all the population must contribute their part, the medical profession supplying the leaders.

COUNTY SOCIETY REPORTS

Rockcastle: The Rockcastle County Medical Society has held regular monthly meetings at the Dixie Boone Hotel, the first Friday of each month. At the last meeting, Friday, December 2, following dinner at 6:30 p. m. a paper, "Acute and Chronic Arthritis," was read by T. A. Griffith, Mt. Vernon. Following a discussion of the paper by Drs. Owens, Pennington, Chesnut, Lewis, and Garrett, there were case reports given. Dr. Henderson was also present and took part in the program. After the usual business was dispensed with, the present officers were reinstated following a motion to such effect by M. Pennington, Mt. Vernon. They are: N. M. Garrett, Brodhead, President; T. A. Griffith, Mt. Vernon, Vice-President, and Lee Chesnut, Mt. Vernon, Secretary.

At the past meeting R. G. Webb of Livingston, presented a paper on Pneumonia, with stress on serum treatment. At the next meeting, January 6, 1939, N. M. Garrett will read a paper on "Immediate Repair of Perineal Laceration." This paper was presented at the Somerset meeting and was enthusiastically received. The Rockcastle County Medical Society, having been reorganized recently, has met regularly for the first time in several years.

Yours respectfully,

T. A. GRIFFITH, Vice-President.
LEE CHESNUT, Secretary.

Whitley: The Whitley County Medical Society met on December 8, 1938 at the office of L. L. Terrell, Corbin. The following officers were elected: President, O. L. Richmond; Vice-President, L. S. Siler; Secretary and Treasurer, C. A. Moss; Board of Censors, Garfield Howard, E. B. Stonesifer, H. W. Terrell; Delegate, L. L. Terrell; Alternate, W. M. Brown; Program Committee, H. W. Terrell, O. L. Richmond, H. H. Tripplette.

There was no further business of the society.
C. A. MOSS, Secretary.

Muldrough Hill: The Society met in Elizabethtown, December 8, at 10 a. m.

The following program was successfully carried out.

Where General Practice Ends and Specialization Begins, by George Bradley, Elizabethtown.
Bronchiectasis, Diagnosis, and Treatment, by Maurice G. Buckles, Louisville.

The Senile Patient, by John Handley, Hodgenville.

After a business session, the meeting adjourned.

S. G. BALE, Secretary.

Scott: The Scott County Medical Society met December 8th, and elected the following

officers for the year 1939: President, A. F. Smith; Vice-President, R. C. Lake, Secretary-Treasurer, Carl M. Gambill; Delegate, H. V. Johnson; Alternate, Carl M. Gambill. The censors are as follows: F. W. Wilt, (1937-1939); A. F. Smith, (1938-1940), and S. S. Amerson, (1939-1941, inclusive).

CARL M. GAMBILL, Secretary.

Jefferson: E. Lee Heflin, was elected president of the Jefferson County Medical Society for 1940, at a meeting Monday night at the Kentucky Hotel.

Dr. Heflin will succeed O. O. Millier, who assumed office as president for 1939, succeeding J. Duffy Hancock.

Other officers elected were: First vice-president, M. J. Henry; second vice president, Arthur T. Hurst; treasurer, Jesshill Love, and secretary, W. B. Troutman.

W. B. TROUTMAN, Secretary.

NEWS ITEMS

W. E. Gardner, President of the Kentucky State Medical Association, and A. T. McCormack, Commissioner of Health, addressed the meeting of the Kentucky Society of Radiographers, which met at the Kentucky Hotel, Louisville, October 17th.

The Laetare Medal, awarded annually by the University of Notre Dame to an outstanding Catholic layman, was bestowed November 5, 1938 upon Dr. Irvin Abell, of Louisville, president of the American Medical Association.

Dr. Abell is the seventh member of the medical profession to receive the award in the past 56 years.

Dr. N. R. Fitch, Bowling Green, a practicing physician in that city for many years, died November 30, 1938.

Dr. J. C. Dodson, who has been practicing in Richelieu for twenty years, died November 1, 1938.

The Cave Area Public Health Association held its regular meeting at the Mammoth Cave Hotel on Tuesday, December 20, 1938. The general theme of discussion was confined to the cooperation between teachers and members of the county health personnel in the mutual problems of keeping the school children healthy.

W. E. Gardner, A. T. McCormack, L. H. South, John R. Pate, Louisville, and John W. Scott, and T. M. Marks, Lexington, were guests of the Bourbon County Medical Society Annual Dinner, Thursday, December 15.

A sectional meeting of the American College of Surgeons will be held in Nashville with headquarters at the Andrew Jackson Hotel on January 18, 19, 20. The following states will participate, Tennessee, Arkansas, Missouri, Mississippi, Alabama, Georgia, Florida, Louisiana, Kentucky. Dr. William D. Haggard is chairman and Dr. H. H. Shoulders is secretary of the committee on local arrangements.

Hospital conferences and panel discussions on administrative and professional problems in hospitals will be held each day, and medical motion pictures covering general surgery and eye, ear, nose and throat surgery will also be shown daily. A Fracture Clinic is scheduled for Friday morning, January 20, and a Cancer Clinic for the afternoon of that day. The meeting will close with a session which will be open to the public on the subject of Conservation of Health.

Graduate training for surgery and the surgical specialties will be discussed at both the hospital and surgical sessions.

The medical profession at large, as well as hospital trustees, superintendents, nurses, and other hospital departmental personnel, will be interested in this meeting, at which there will be no registration charge. Members of the Kentucky State Medical Association are most cordially invited to attend.

Physicians interested in allergy are invited to attend the North Central Forum on Allergy to be held at the Commodore Perry Hotel, Toledo, Sunday, January 15.

The meeting will open with an informal "get-together" Saturday evening, January 14, at the Commodore Perry Hotel. Physicians planning to attend the Forum are urged to arrive in time for this social session which may be the highlight of the meeting.

This meeting was planned to foster acquaintance and exchange of ideas of members of the Cleveland, Chicago, Michigan and Ohio Valley Society of Allergists. Members of the Kentucky State Medical Association, who are interested in allergy are most welcome.

Further information can be obtained by addressing Dr. Karl D. Figley, 316 Michigan Street, Toledo, Ohio.

Application blanks are now available for space in the Scientific Exhibit at the St. Louis Session of the American Medical Association, May 15-19, 1939. Attention is called to the fact that the meeting is a month earlier than usual, and applications close January 5, 1939. Blanks will be sent on request to the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn St., Chicago.

Dr. R. N. Williams, 77, of Sanders, died sud-

denly at his home of a heart attack. Dr. Williams was Carroll County's oldest physician both in age and years of service and has long been prominent in public health work in the county. Since his graduation from the Louisville College of Medicine in 1898 he has practiced medicine continuously in Carroll County.

The Southeastern Surgical Congress will meet in Atlanta, Georgia, at the Atlanta Biltmore Hotel, March 6, 7 and 8, 1939. This Association will be remembered very pleasantly by the doctors of Kentucky who attended the meeting in Louisville last year. It is voted by many that it is one of the best, most intensive post-graduate surgical courses they ever attended.

The New Orleans Graduate Medical Assembly invites the physicians of Kentucky to attend their annual meeting February 6, through 9th at the Roosevelt Hotel, New Orleans. America's most distinguished physicians will be the speakers, and for further information you may write to the Secretary, 1430 Tulane Avenue, Room 105, New Orleans, La.

The American Board of Ophthalmology announces an important change in its methods of examination of candidates for the Board's certificate.

Examinations will be divided into two parts. Candidates whose applications are accepted will be required to pass a written examination which will be held simultaneously in various cities throughout the country approximately 60 days prior to the date of the oral examination.

The written examination will include all of the subjects previously covered by the practical and oral examinations.

Oral examinations will be held at the time and place of the meeting of the American Medical Association and of the American Academy of Ophthalmology and Oto-Laryngology, and occasionally in connection with other important medical meetings. The oral examination will be on the following subjects: External Diseases, Ophthalmoscopy, Pathology, Refraction, Ocular Motility, Practical Surgery.

Application forms and detailed information should be secured at once from Dr. John Green, Secretary, 6830 Waterman Ave., St. Louis, Mo.

The officers of the International College of Surgeons announce that the international College, in connection with the United States Chapter of that body, will hold its Assembly in New York City at the Hotel Roosevelt on May 22, 23 and 24, 1939.

Dr. Edward Frankel, Jr., of 217 East 17th St., New York City has been appointed by the International officers as General Chairman of this assembly.

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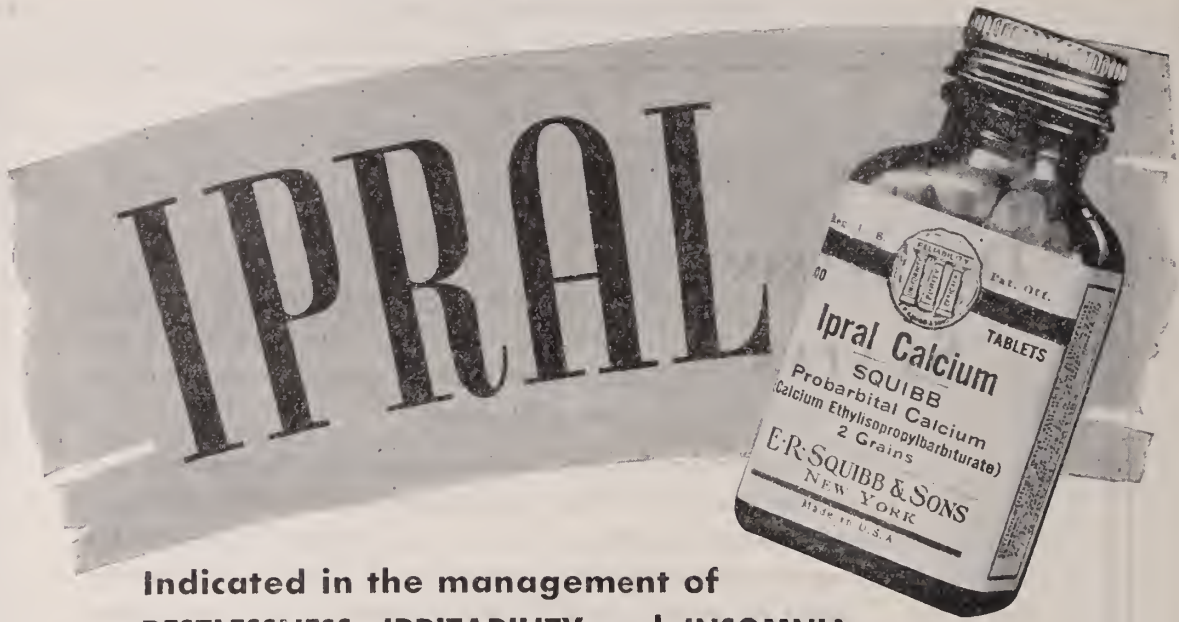


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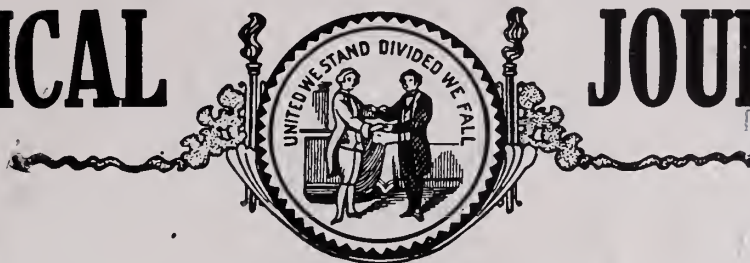


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FEBRUARY, 1939

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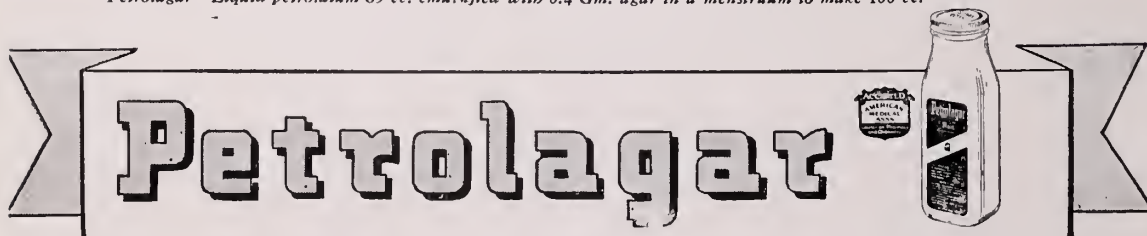
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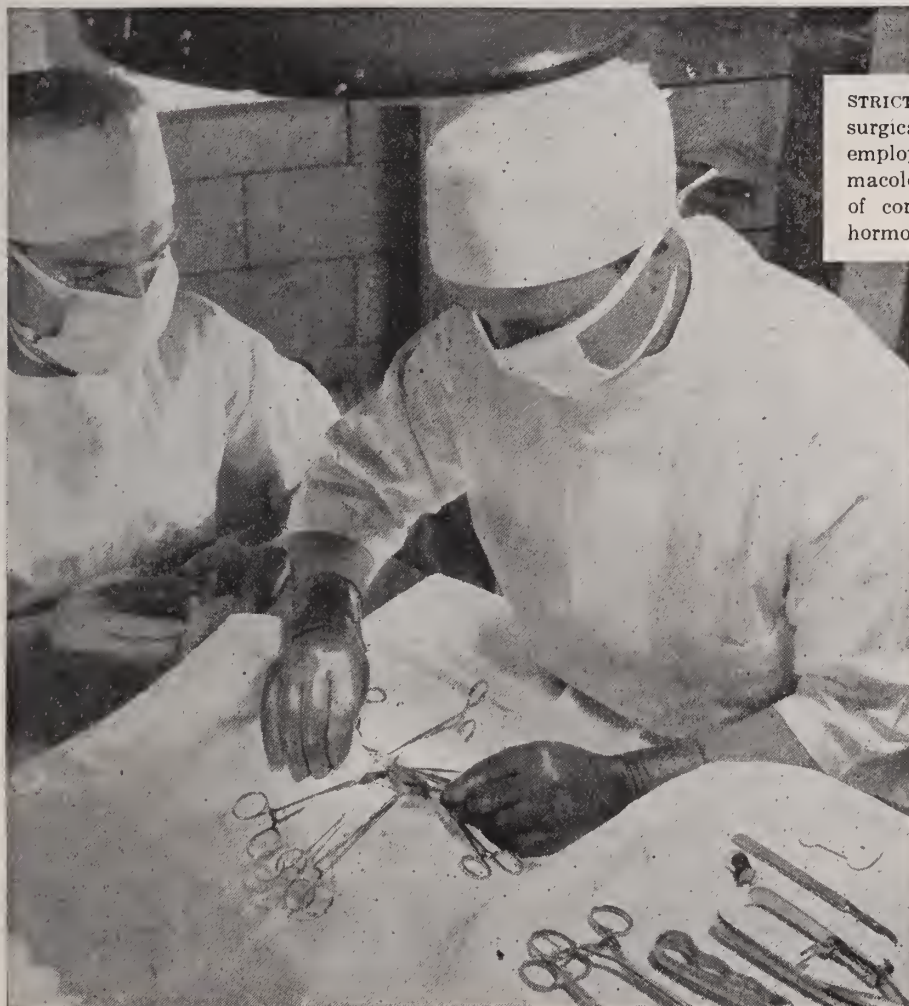
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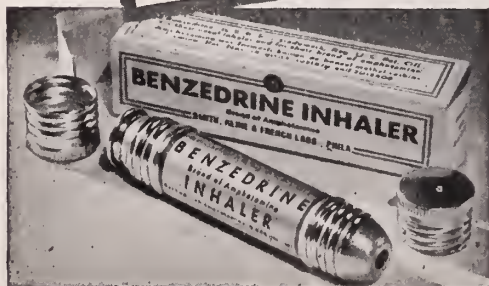
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This discovery is of the most basic importance in the field of vitamin B₁ research. Determination of the chemical nature of this factor permits not only explanation of certain previously known facts concerning vitamin B₁, but in addition, has opened new fields of research. One of these is already concerned with the development of a reliable chemical method for estimation of thiamin which will be generally applicable to foods.

At present, quantitative determination of vitamin B₁ necessarily requires the use of one of the several bioassay methods available for that purpose. None of these is entirely satisfactory (1, 2). Perfection of a chemical method for quantitative measurement of thiamin in foods would add greatly to our knowledge of its occurrence in nature,

as well as permit more comprehensive studies of factors which might influence the stability of vitamin B₁ in foods. We have a relative paucity of such data relating to vitamin B₁ when the available information on vitamin C is considered.

It should also be stated that the synthesis of thiamin—which is now produced on a commercial basis—has already provided the clinician with a most useful diagnostic tool. Administration of the pure vitamin in cases of suspected thiamin deficiency, with notation of the therapeutic response, constitutes the most trustworthy means of detecting avitaminosis B₁. After the diagnosis has been confirmed and the immediate deficiency corrected by administration of thiamin, it is desirable that future adequate supply of vitamin B₁ be obtained through dietary readjustments (1).

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- (1) 1938. J. Amer. Med. Assn. 110, 727.
- (2) 1938. Ibid. 111, 927.
- (3)a. 1936. J. Nutrition 11, 383.
- b. 1936. J. Amer. Diet. Assn. 12, 231.

- (4)a. 1932. J. Nutrition 5, 307.
- b. 1932. Ind. Eng. Chem. 24, 457.

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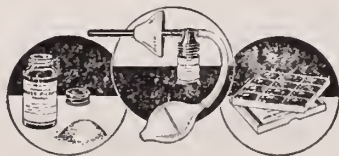
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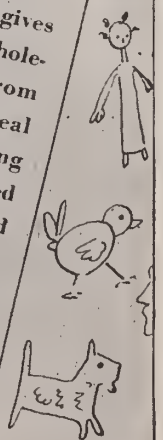


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Allen	A. O. Miller	Scottsville	February 22
Anderson	J. B. Lyen	Lawrenceburg	February 6
Ballard	F. H. Russell	Wickliffe	
Barren	Rex Hays	Glasgow	February 15
Bath	H. S. Gilmore	Owingsville	February 13
Bell	E. S. Wilson	Pineville	February 10
Boone	R. E. Ryle	Walton	February 15
Bourhon	Eugene L. D. Blake	Paris	February 16
Boyd	Hubert J. Pritchard	Catlettsburg	February 7
Boyle	P. C. Sanders	Danville	February 21
Bracken-Pendleton	W. A. McKenney	Falmouth	February 23
Breathitt			February 21
Breckenridge	J. E. Kincheloe	Hardinsburg	
Bullitt	G. F. Brockman	Shepherdsville	
Butler	G. E. Embry	Morgantown	February 1
Caldwell	W. L. Cash	Princeton	February 7
Calloway	Hugh L. Houston	Murray	February 3
Campbell-Kenton	C. W. Air	Ludlow	February 2 & 16
Carlisle	F. E. Smith	Bardwell	February 7
Carroll	J. M. Ryan	Carrollton	
Carter	Don E. Wilder	Graveson	February 14
Casey	William J. Sweeney	Liberty	February 23
Christian	Fred T. Harned	Hopkinsville	February 21
Clark	R. E. Strode	Winchester	February 17
Clay	J. L. Anderson	Manchester	February 14
Clinton	S. F. Stephenson	Albany	February 18
Crittenden	C. G. Moreland	Marion	February 13
Cumberland	W. F. Owsley	Burkesville	February 1
Daviess	Lee Tyler	Owensboro	February 14 & 28
Elliott			
Estill	Virginia Wallace	Irvine	February 8
Fayette	John Harvey	Lexington	February 14
Fleming	Roy Orsburn	Flemingsburg	February 8
Floyd	J. G. Archer	Prestonsburg	February 22
Franklin	Grace R. Snyder	Frankfort	February 2
Fulton	Russell Rudd	Fulton	February 8
Gallatin	J. M. Stallard	Sparta	February 16
Garrard	J. E. Edwards	Lancaster	February 16
Grant	Paul E. Harper	Drv Ridge	February 15
Graves	H. H. Hunt	Mayfield	February 7
Grayson			
Green	S. J. Simmons	Greensburg	February 6
Greenup	R. L. Compton	Greenup	February 10
Hancock	F. M. Griffin	Hawesville	February 6
Hardin	D. E. McClure	Elizabethtown	February 9
Harlan	C. M. Blanton	Harlan	February 18
Harrison	W. B. Moore	Cynthiana	February 6
Hart	S. F. Richardson	Munfordville	February 7
Henderson	Walter O'Nan	Henderson	February 13 & 27
Henry	Owen Carroll	New Castle	February 27
Hickman	B. E. Russell	Clinton	February 2
Hopkins	David L. Salmon	Madisonville	February 2
Jackson	Thomas L. Boneta	McKee	February 4
Jefferson	W. B. Troutman	Louisville	February 6 & 20
Jessamine	J. A. VanArsdall	Nicholasville	February 23
Johnson	P. B. Hall	Paintsville	February 11
Knott	M. F. Kelley	Hindman	February 25
Knox	W. Parker Clifton	Barbourville	February 24
Larue			
Laurel	Oscar D. Brock	London	February 8
Lawrence	L. S. Haves	Louisa	February 20
Lee	W. D. McCollum	Beattyville	February 11
Leslie			
Letcher	J. E. Johnson	Jenkins	February 28
Lewis	C. P. Pennington	Vanceburg	February 20
Lincoln	Lewis J. Jones	Hustonville	February 17
Livingston	J. E. Dunn	Smithland	
Logan	Walter Byrne	Russellville	
Lyon	H. H. Woodson	Eddyville	February 7
McCracken	Leon Higdon	Fadueah	
McCreary	R. M. Smith	Stearns	February 6
McLean			February 9
Madison	H. C. Blanton	Richmond	February 16
Marion	S. C. Clarkson	Lebanon	February 28
Marshall	S. L. Henson	Benton	February 15
Mason	O. M. Goodloe	Maysville	February 8

COUNTY	SECRETARY	RESIDENCE	DATE
Meade	S. H. Stith	Brandenburg	February 23
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	February 14
Metcalfe	E. S. Dunham	Edmonton	
Monroe	George E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mount Sterling	February 14
Morgan			
Muhlenberg	E. L. Gates	Greenville	February 14
Nelson	R. H. Greenwell	Bardstown	
Nicholas	T. P. Scott	Carlisle	February 20
Ohio	Oscar Allen	McHenry	February 1
Oldham			February 7
Owen	K. S. McBee	Owenton	February 2
Owsley	John R. Aker	Booneville	February 6
Perry	D. D. Turner	Hazard	February 13
Pike	H. K. Bailey	Pikeville	February 20
Powell	I. W. Johnson	Stauton	February 6
Fulaski	M. C. Spradlin	Somerset	February 9
Robertson			
Rockcastle	Lee Chestnut	Mount Vernon	February 3
Rowan	A. W. Adkins	Morehead	February 13
Russell	J. R. Popplewell	Jamestown	February 13
Scott	Carl M. Gaubill	Georgetown	February 2
Shelby	A. D. Doak	Shelbyville	February 16
Simpson	N. O. Witt	Franklin	February 14
Spencer			
Taylor	M. M. Hall	Campbellsville	February 9
Todd	B. E. Boone, Jr.	Elkton	February 1
Trigg	H. L. Wallace	Cadiz	February 22
Trimble			
Union	D. C. Donan	Morganfield	February 22
Warren Edmonson	Hal Neel	Bowling Green	February 8
Washington	J. H. Hopper	Willisburg	February 15
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	February 24
Whitley	C. A. Moss	Williamsburg	
Wolfe	G. M. Center	Campton	February 6
Woodford	George H. Gregory	Versailles	February 2

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¹ Levitas, Irving M.: Treatment, Modification and Prevention of Measles by Use of Immune Globulin (Human), J.A.M.A., 1935, 105, 493.

² Laning, G. M. and Horan, T. N.: Immune Globulin Used as a Preventive and Modifier of Measles, Jour. Mich. Med. Soc., 1935, 34, 772.

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ORIGINAL ARTICLES

THE PROPER PELVIC EXAMINATION*

HOWELL J. DAVIS, M. D.

Owensboro.

It is with considerable trepidation that I, a mere neophyte in the art of medicine, undertake to present to you, who have probably done thousands of pelvic examinations where I have done hundreds, a discussion of the Proper Pelvic Examination. However, this is a subject which interests all of us. Even at my tender age, medically speaking, I have experienced the bitter chagrin of failure to make a correct diagnosis simply because I failed to include a pelvic examination in my physical examination. I am sure that most of you have had similar experiences. Every practitioner of general medicine, as well as the surgeon and the gynecologist, has the female pelvis to deal with. Perhaps I can help you and you can help me in your discussions to do more and better pelvic examinations.

No attempt will be made to discuss an obstetrical pelvic examination, rather the paper will be confined to a discussion of the proper gynecological examination; including a detailed history, a bimanual and speculum examination. Only a brief discussion of pelvic roentgenography and colposcopic examination will be attempted. This paper must necessarily be of a somewhat didactic nature so I beg your indulgence.

HISTORY—The usual general medical history should be taken, including a systemic review, past medical history, past surgical history, family history and social history with the occupation of the patient. When the patient's complaint has no relation to the pelvis, the usual systemic review, including the menstrual history under the heading of genitourinary system should suffice, but where the complaint is gynecological, a complete gynecological history should be taken.

I have been in the habit of dividing my

gynecological history into five headings, 1. Menstrual, 2. Obstetrical, 3. Past Pelvic, 4. Marital, 5. Urinary and Rectal or Extra Genital.

The menstrual history should include the following items: age of onset of menstruation; a description of the menstrual cycle as to regularity of occurrence, duration of flow, character and amount of flow; bleeding between periods; presence or absence of discharge, character of, and amount of discharge; the use of douches, kind, when, and how often; presence or absence of pain, location and type of pain; and finally the date of the last menstrual period. Any alterations in the menstrual cycle since onset should be noted. If menopause has occurred a description of it should be obtained; age when occurred, duration, presence or absence of nervous phenomena, presence and character of discharge or bleeding following menopause. All of this information elicited is of value. For instance, early onset of menses is usually associated with early onset of menopause. Excess menstrual bleeding at time of period is frequently found in retroversion, in tubo-ovarian infection, and in submucous fibroids. Dysmenorrhea that appears before a period and continues until several days after is often found in endometrosis. A profuse brownish discharge or spotting of bright blood after menopause should be a warning of probable carcinoma of the uterus, either cervical or fundal.

The obstetrical history should include the number of pregnancies, how long carried, complications, if any; type of delivery, spontaneous, by forceps, or manipulation; complications such as hemorrhage, laceration, or infection; the number of miscarriages, their dates, how long carried, whether spontaneous or induced; any complication, such as hemorrhage, infection, failure of the uterus to completely evacuate; and measures necessary to insure evacuation; should be included in this history.

The information to be obtained for past pelvic history should include all previous pelvis injuries, infections, inflammations, and operations. This information usually

*Read before the Kentucky State Medical Association, Louisville, October 3-6, 1938.

overlaps that of the menstrual history and past medical history.

The marital history may or may not be taken in detail. It should include the number of years married and the health of the husband. The most important complaint as far as pelvic examination is concerned is dysprunia or pain on intercourse. It is important to know the type of pain so as to determine whether it is from vaginospasm or retroversion. The detailed marital history as to frequency of intercourse, conditions under which it is indulged, ability to obtain orgasm, type of contraception, if any, usually need not be discussed since it embarrasses the average woman patient.

The extragenital pelvic history is usually obtained in the history elsewhere but for the sake of completeness it might be well to enumerate the symptoms usually sought under this heading. I refer to the feeling of bearing down in the lower abdomen; the backache and feeling of loss of support so frequently found in the various degrees of procidentia and prolapse of the uterus; to the low grade cystitis with dysuria, inability to completely empty the bladder, occasionally the difficulty in starting micturition in the cases of cystocele; to the difficulty in controlling micturition and the voiding on straining and coughing found in damaged urethral sphincters; the pain and frequency associated with urethral caruncle and acute urethritis; the difficulty in defecation found in severe degrees of rectocele; to the loss of control of bowels with third degree perineal lacerations.

This is one place that I do not believe history can give more information than that of physical examination but here as elsewhere in the body a carefully taken history can go a long way toward giving us a clue that will lead to the correct diagnosis. Let me urge that you make your histories detailed in the cases with pelvic complaints.

Let me say a few words about the preparations for examination of the patient. Fortunately the style of petticoats and numerous undergarments is on the wane so that it is a simple matter for the average woman to bare herself from the waist down. However, if she happens to be one of the out-sized females who insist on wearing a ribbed corset let me assure you it is worth the extra time necessary to have her unbind herself. All of you who have tried to do a bimanual pelvic examination through a stiff corset will agree. The next step is to see that at least the bladder is empty. A full bladder

not only adds to the discomfort of the patient but will mask all but the very grossest of pathology. It is desirable that the bowel be empty of gas and fecal matter since it also can interfere with the examination.

The patient is now ready to be placed upon the examining table and draped. There are lots of positions in which the patient may be placed but the one most universally used is that of lithotomy with patient supine on table, heels in stirrups, knees and thighs flexed, hips resting at the edge of table. It might be well to mention that in obscure cases knee chest position may be used to advantage. For draping the usual half sheet may be used.

The equipment of the examiner may be listed as follows: A glove, lubricant, light, vaginal speculum, cotton swabs, clean glass slides, a bottle of saline solution, and a witness. Not all gynecologists use gloves, and it is true that a gloveless hand is more sensitive, but for the examiners own protection I believe it is well to use a rubber glove. The lubricant may be one of the vaseline types but since it is not water soluble it is less desirable than the usual water soluble lubricants with a glyceride of starch base. If one has a good spotlight it may be used, but the ordinary gooseneck light can be amplified and concentrated by the use of a common head mirror such as is used by the otolaryngologists. The speculum most used is one of the various sized bivalve Graves type. Swabs, slides and saline solution are for the examination of discharge, if any. The witness is for the protection of the doctor and the reassurance of the patient.

The examination should begin with the external genitalia. Here again an established routine provided it is thorough is a tremendous help in developing speed and efficiency. I usually begin with a glance at the pubic hair to determine whether it is of the typically transverse female type or of the triangular male type with the apex pointing toward the umbilicus. I do not believe pediculi present much of a problem in the average private practice.

The labia should be inspected for deformities, scars of injuries, or old Bartholin infection, varicosities, primary and secondary lesions of syphilis, venereal warts, pigmentations, fissures, leucoplakia, and kraurosis. This can usually be done by picking them up to eliminate their normal folds, looking at the outer and inner surfaces. At the same time the labia minora including

the clitoris and its hood can be inspected.

Next the urethral orifice should be examined for relaxation, stenosis, prolapse of the mucosa, and for the presence of caruncle. A very important part of this examination should be an attempt to milk Skene's tubules whose orifices are just within the urethral opening. The secretion is normally thin, clear mucous. Any abnormal secretion should be examined microscopically. This is a common site for gonorrhea in the female. The actual technique of milking these glands is simple. The index finger, with the palmar surface upward, is placed within the vagina and pressure made through the urethra against the pubic arch beginning about one-half inch behind the urethral orifice and carrying the pressure forward to the opening.

Bartholin's glands normally can be palpated between the thumb and forefinger as small flat fusiform bodies on either side of the vulva about halfway between the perineum and the urethral orifice. Their openings are small puncta found near the anterior end of the gland. These orifices are best identified by the small drops of thin clear mucoid secretion that normally exudes when the glands are milked. Here again, any deviations from the normal secretion should be examined by microscope. These glands occasionally form painful abscesses which are usually Neisserian in origin.

At this time the inspection of the perineum should be made for scars of birth injuries or old episiotomies. An estimate of the degree of damage and loss of support can be made. In the more severe types of perineal tears occasionally one finds loss of control of the anal sphincters. If the sphincters are completely avulsed the dimple caused by the torn ends in the scar can usually be seen and the normal puckered appearance of the opening is lost.

Having completed the examination of the external genitalia, perineum and anal orifice the examiner now should proceed to the bimanual examination. This can be facilitated or hindered by the manner of the physician, his position while examining and his gentleness or his lack of it. In extremely young, apprehensive, or uncooperative patients one may be forced to resort to a general anaesthetic. Let me urge that you do not hesitate to do so when the occasion seems to justify it.

The position of the examiner should be one in which the examining hand can be entirely free from strain. Most examining ta-

bles are provided with a small step on which the examiner can place one foot supporting the vaginal arm and hand on his flexed knee, thereby giving the forearm and hand freedom from strain. It is my habit to use the left hand as the vaginal hand for the simple reason that instruments can then be handled by the right hand. Whatever hand is used, use it consistently to train it in its part of the examination.

Having lubricated the index and middle finger of the vaginal hand the index finger is inserted to test the patency of the hymen. Only occasionally is one forced to do a one finger examination because of lack of dilatation of the hymen in the average adult female. In children, one is usually forced to do the bimanual by way of one finger in the rectum. Next the labia should be separated by the index finger and thumb and the patient instructed to strain or bear down. This is to determine the presence or absence of cystocele or rectocele, which will be seen as bulging of varying degrees in the anterior or posterior walls of the vagina respectively. If the patient has had children it is well at this point to test the strength of the levator muscle sling, first by palpating the external margins between the thumb and forefinger, and then by making pressure downward and backward with the index and middle fingers in the vagina. I also make a habit of palpating the urethral musculature with the index finger to determine presence or absence of damage from childbirth.

Having examined the muscles supporting the vagina, an urethra digital exploration of the vaginal walls should be made for congenital defects, scars, fistulae, ulcerations, foreign bodies, fissures, leucoplakia, kraurosis, and constrictions or stenosis.

As the vaginal hand is passed deeper into the vagina the cervix of the uterus will be encountered. Its size, shape, and consistency may vary from the small, firm, conical multiparous cervix to the large boggy lacerated cervix of the multipara; from the pregnant "soft as your lips" cervix to the "hard as your nose" non-pregnant cervix. Its position and direction may vary from the normal deep position to a position anterior and behind the symphysis as in complete retroversion, and in the presence of large pelvic masses. In the latter case its axis may parallel that of the vagina, whereas normally it is at right angle to it. Normally, the surface of the cervix is smooth, but often hard, shotty, Nabothian cysts can be palpated. I have heard it said by competent physicians that they can palpate cervical erosions. To

date the skill of my gloved hand has not attained that degree of efficiency. However, we can all feel the stony, hard areas, with or without ulceration, found in carcinoma of the cervix, and can estimate the depth of cervical lacerations when they are present. Patency of the cervical canal at the external os can be determined by slipping one finger into it, and occasionally a cervical polyp can be palpated as it protrudes into, or through, the os. Some estimate should be made of the movability of the cervix since it is an index of extracervical spread of carcinoma of the cervix. Just what the limits of movability are is hard to determine since it would vary widely from the normal relative lack of movability of the nulliparous woman to the normal rather wide range of motion present in the multiparous woman.

Having explored the cervix, the next logical step in the bimanual examination is the palpation of the uterus. First, its position, whether in a normal antiflexed position or in some degree of retroflexion or retroversion, should be determined. Then its shape and size should be examined. Normally, in the female past puberty, it is about the shape and size of the average canned pear, and its consistency is usually rather rubbery. It is normally slightly movable and either absolute fixation, or wide range of motion, is to be considered abnormal. Movement of the uterus is, normally, only mildly uncomfortable.

Any irregularities of contour should be noted since they are usually found in the various types of tumors involving the body of the uterus, in general, fibroids.

Having examined the body of the uterus the adnexae should be palpated. Except in the very obese the normal ovary can be palpated between the vaginal and the abdominal hand as a small flat peach seed sized, slightly tender mass. The Fallopian tubes normally are not palpable. The normal ovary is rather freely movable. Masses in the adnexal regions should be explored to determine their size, shape, consistency, mobility and tenderness. The acutely tender cystic masses caused by tubal infections and the acutely tender unilateral mass of ectopic gestation can usually be recognized, but occasionally one is completely at loss to determine the source of an adnexal mass, either cystic or solid.

The cervix and vaginal wall should now be inspected by means of one of the bivalve type specula. As has been previously stated, the Graves is the type most universally used at present. It can be had in three different sizes to suit the case to be examined. An ad-

vantage of the Graves speculum not generally known or used is the fact that the anterior or upper blade can be removed leaving the lower blade as an excellent vaginal retractor. The light projected into the vagina to illuminate the parts may be that of a powerful spot light, or may come from the use of the otolaryngologists head mirror, which provides a very satisfactory light. Here again the usual position is that of lithotomy, although in some instances, where a much dilated vagina is desired, a knee chest position such as that used by the proctologists can be of a great deal of assistance.

The speculum should be well lubricated and gently introduced and the valves opened to expose the cervix. Conditions for which the cervix should be examined include alterations in shape, size, color, consistency; the presence of Nabothian cysts; the presence and severity of lacerations; presence or absence of eversion; the appearance of erosions; and changes in the character of the surface covering of the cervix. Those areas with increased density and a tendency toward free bleeding on traumatization should be examined for carcinoma. One of the more common tests is that of Schiller's iodine test in which the cervix is painted with an iodine solution, the composition of which may be that of Lugol's or Grams iodine solution, the latter being more satisfactory. The normal surface will be stained an even brown, whereas the supposedly dangerous tissues fail to take the stain. Personally, I place very little faith in this or other similar tests for carcinoma of the cervix. It is my feeling that if any question of cancer arises a biopsy specimen should be removed from the area suspected by means of an endotherm and the material examined microscopically. It is true that the Schiller test will indicate the area best to be examined microscopically, but when used alone it is easy to confuse leucoplakia with early cancer.

The type of discharge should be noted and if more than the clear mucus found in the cervical canal with a mixture of vaginal epithelium an attempt to determine its source should be made. It might be well to mention a little differentiation of the two most common pathological discharges found in the vagina.

The characteristic gonorrheal discharge is yellowish and thick in character, and, in the patient past puberty, usually springs from the cervical canal. The characteristic gram negative intracellular diplococci can be detected in the discharge taken from the cervical canal by the usual staining methods, and microscopic examination. The characteristic

trichomonas discharge on the contrary is thin, foamy, and whitish. It usually springs from an irritated vaginal wall with minute punctate hemorrhagic areas scattered over it. It is best examined by diluting several drops of the discharge with a little warm Ringers or saline solution and examining without staining. The trichomonas vaginalis is seen as a flagellate unicellular organism.

This completes the proper pelvic examination for the general surgeon and the general practitioner, but there are several special methods of examination of the female pelvis to which reference should be made for the sake of completeness.

I refer to the special roentgenological procedures of pneumoperitoneum and lipiodol injection. Undoubtedly there are experts present who can tell more of these special methods than I. The pneumoperitoneum or pelvic pneumogram is accomplished by injection of carbon dioxide into the pelvis usually through the cervical canal where it is but a continuation of a tubal patency test or it may be injected through the anterior wall as in an abdominal paracentesis. The quantity used may vary from 500 cc to 1500 cc, depending upon the discomfort of the patient. Roentgenograms are taken with patient lying on her face with hips high. Remarkable detail can be obtained as to the size, shape, and source of pelvic masses in obscure cases. Like most special methods it is, and should be, reserved for unusual cases.

The use of intrauterine and intratubal contrast media has received considerable attention in the past few years. Its advocates believe it far superior to curettage as a means of diagnosis of carcinoma of the fundus of the uterus. Certainly it is a special method of examination requiring special equipment for performance and special training in its interpretation. For that reason it should not concern us greatly.

The same criticism is to be made of the use of the colposcope. This is an instrument for examination of the cervix under magnification, especially the junction of stratified squamous epithelium with the columnar epithelium of the cervical canal. It consists of a monocular or binocular telescope with a focal distance of a little greater than the depth of the average vagina, that is 8-15 cm. providing magnification of 5-16 power with a powerful light incorporated in the mechanism. Of course its use depends upon a knowledge of the early gross and microscopic changes in the epithelium examined.

These remarks concerning the special methods of examination are included only to provide an opportunity for discussion of them

by those of you who are more familiar with them than I. What this paper attempts to do is to urge that you do more and better pelvic examinations and I hope by your discussion you may help me to do the same.

DISCUSSION

J. B. Lukins, Louisville: There have been some rumblings from high sources of late that the medical profession has not been living up to its opportunities. When I was a medical student and an interne several years ago, one of our most lovable professors, a skillful and a noted surgeon, was in the habit of saying just before he made his incision, with his scalpel in his hand: "Now, boys, this is one of seventeen conditions." We all smiled, nodded more or less approval. That was all right, but that was thirty years ago, and certainly we should make some progress in the examination and diagnosis of our patients in thirty years, and I think we are making progress.

We have gone all over the state talking about cancer. We have told them that cancer is incurable when the patient has a lot of pain, when she has continuous bleeding; at that time she is in the last stages. We have also told them that cancer is curable in the early stage, and have emphasized the importance of recognizing it at the earliest possible moment.

It is not always possible to detect cancer in the inaccessible portions of the body, for example, in the liver, the colon or the sigmoid, but we have said that in the breast and in the uterus, particularly the cervix, in fact in all pelvic organs, any average doctor should make a diagnosis of cancer or suspected cancer, because the cervix and the breast are particularly accessible. This is often early enough for a complete cure to be effected.

As someone said last night in the meeting, the time to cure cancer is before there are any clinical symptoms by making the diagnosis then. Of course, that is often difficult. It is not always easy to make an exact diagnosis, but we are going to try to emphasize some ways that we can raise our percentage in pelvic cases.

I sometimes find myself making my incision in the mid-line when I really don't expect to do anything except to take out the appendix, but we can't always be real sure.

Dr. Davis has given us a complete outline of pelvic examination of the female. It is almost impossible for most of us who are busy to make that nearly ideal examination in every case, but we can endeavor to approach it. We can't neglect the simple, everyday things that mean so much to the welfare of the patient.

I doubt if there is any pathological condition

anywhere in the body in which the history is more important than in pelvic conditions.

There are just two points in the history that I should like to emphasize. First is the regularity or irregularity of the menstrual flow. You know the average answer that we get from the patient is that her sickness is all irregular, you can't tell anything about it. That really doesn't mean anything. If we will find out whether or not her menstrual flow lasts five or six or eight or ten days instead of the average three or four days, it may mean something to us; or if we will find out whether she menstruates every two weeks instead of every four weeks, it may mean something; or if we will find out, if it is a post-menopausal case, whether there is any blood at all, it will mean something to us.

I have the habit, in teaching the students at the University along this line, of emphasizing these points. They are not always accurate; it doesn't always make a correct diagnosis for us, but it does show us which line we are on.

I have found that the average case of cyst of the ovary menstruates about every two weeks, and a fibroid case will have a prolonged menstruation, and a chronic salpingitis will have a very prolonged menstruation accompanied by pain and sometimes a little fever.

I want to take time to say a little about the Schiller test. I have used that very conscientiously and faithfully for three years in the office, almost daily. It perhaps is of some value. I wouldn't discredit it entirely, but please do not rely on it for accurate diagnosis of carcinoma of the cervix. I have tried it in cases that I knew had carcinoma of the cervix, after I had had a biopsy done, and it didn't prove out. I don't think all of us ought to quit trying it, I would advise you to continue it, but I would not advise you to depend on it absolutely.

If we go on making slipshod examinations of the female pelvis, it can only add to the criticism and to the discredit of our beloved profession, but if we will try to be more accurate, try to attain the ideal as outlined in this splendid paper by Dr. Davis, I believe that we will succeed in reducing the mortality of carcinoma of the female uterus.

A. T. McCormack, Louisville: I want to call one note in Dr. Lukins' discussion that I am sure he didn't intend to say. He said sometimes we are too busy to make as meticulous an examination as Dr. Davis has outlined. He didn't mean to say that because he went on to say afterwards that slipshod examinations and failure to carry through in every detail would bring a reflection on the profession. If we are going to make an examination at all, make a complete

examination of that patient. If you are too busy to make that examination, send that patient to somebody who has time to make it. If you don't do that you are going to reflect on the profession. I am sure I am saying just exactly what Dr. Lukins intended to say because I know him so well that I know that is exactly what he meant, although it might be misconstrued as an excuse for some of us sometimes to be careless. Nobody has any excuse for being careless, particularly the man who has enough reputation to be busy has the least excuse for being careless. Those of you who have patients waiting in your offices should get more assistants or send your patients to somebody else if you haven't time to complete their examination.

Irvin Abell, Jr., Louisville. In the management of uterine bleeding, vaginal discharge, and pelvic pain the most important single consideration is the establishment of an accurate diagnosis; for effective treatment must always be based upon a correct appreciation of the pelvic pathology. This knowledge may be gained by a satisfactory pelvic examination, by a satisfactory pelvic examination followed by a diagnostic dilatation and curettage, and finally in some cases only by opening the abdomen. A satisfactory pelvic examination will identify such lesions as an ovarian cyst, retroversion and subinvolution, subserous and intramural fibroids, pelvic inflammatory disease, cervical polyps, advanced carcinomas of the cervix, and finally certain cases of incomplete abortion and tubal pregnancy. It will not, on the other hand, disclose the presence of early cervical carcinoma, endometrial polyps, submucous fibroids, hyperplastic endometrium, adenocarcinoma of the uterine body, and some cases of incomplete abortion and tubal pregnancy. The two conditions which can not preoperatively be diagnosed successfully are in our experience tubal pregnancy and endometriosis. Our preoperative recognition of tubal pregnancy occurred in only 66% of the cases and in endometriosis in less than 10% of the cases.

The following series of cases are presented to emphasize the fact that at least in our experience the majority of patients operated upon because of pelvic pathology are in the cancer bearing period of life. In 100 consecutive cases of Functional Bleeding, 63% of the patients were 40 or older, in 100 consecutive cases of Incomplete Abortion, 50% were between 30 and 40 years of age, in 100 consecutive Cervical Polyps 72% were between 40 and 60 years, in 45 consecutive Tubal Pregnancies, 63% were between 30 and 40 years, in 44 consecutive Carcinomas of the Body, all were between 48 and 62 years, and in 15 consecutive

Cervical Carcinomas, all were between 42 and 60 years. Recognizing then the possibilities, can one remove a cervical polyp and be certain without performing a dilatation and curettage that there is no endometrial polyp, no submucous fibroid, no hyperplastic endometrium, or no adenocarcinoma of the body? Can one safely administer roentgen therapy to small uterine fibroids in a woman over 40 without doing a diagnostic dilatation and curettage? In the other 44 cases of adenocarcinoma of the body, there were 15 preoperative clinical diagnoses of fibromyomata. Within the last twelve months we performed a hysterectomy for a large fibromyomata. The pathologist later on opening the uterine cavity, viewed a lesion which grossly was an adenocarcinoma. We have on two occasions placed radium within the uterine cavity for functional bleeding after frozen tissue sections were reported negative. When the permanent sections were studied, both proved to be adenocarcinoma. And finally, after removing a cervical polyp the curettement which was grossly diagnosed as endometrial polyposis proved to be adenocarcinoma.

To protect the patient's life, we attempt to avoid those deadly errors in diagnosis by the following general scheme. If a patient whose clinical history suggests pelvic pathology can not be examined satisfactorily, a pelvic examination under anesthetic is advised. If a patient complaining of menorrhagia is older than 30, a dilatation and curettage is advised: if over 35, it is urged. And all patients presenting the symptom of menorrhagia are, irrespective of their age, advised to have the diagnostic procedure performed. As regards lesions of the cervix, we are in accord with the views expressed by Dr. Davis and Dr. Lukins. An increase in the present number of five year cures in cervical carcinoma can be achieved only by earlier diagnosis; and this early diagnosis can be made not by the Schiller Test, not by the colposcope, not by direct visualization, but alone by biopsy. Cervical disease in multiparous women over forty years of age is most safely treated by surgical procedures.

John W. Price, Jr., Louisville: There is just one word that I want to add to this discussion for the record, and that is this: that in the majority of cases of pelvic disease, with the aid of the history and the pelvic examination, we are able to diagnose perhaps 90 per cent of the cases; the other 10 per cent lie in that group which was referred to by Dr. Abell as those in which we cannot make the diagnosis by history or by examination, but we have pretty good idea of it.

I recall one story that the late Dr. Louis McMurphy told us at the City Hospital a number of years ago. He had just returned from a special meeting of the Clinical Surgical Society in St. Louis, and he said that they had all gathered a small group in the operating room; the surgeon came in with his patient and announced that he was going to do a hysterectomy for a fibroid uterus, and he was going to follow certain procedures, which he then outlined. He said imagine his embarrassment when as soon as he had made his incision he found that this woman was pregnant. There was a great silence all over the room, and finally Dr. Charlie Mayo, who was a member of the Association, arose and said, "Gentlemen, if there is one man here who has not had this accident happen to him, will he please rise?" Not a single man rose.

I was a youngster at the time; I had been on the hospital staff in the female ward of the City Hospital for only about eight years, and up to that time I had not made that mistake in diagnosis. I sort of patted myself on the back, but I didn't say anything to Dr. Mac about it. It wasn't more than a year after that that we had a patient admitted to the ward of the hospital with this history. She was the daughter of a boarding house keeper for medical students. She was the intimate friend of a senior medical student. The senior medical student was a patient in the clinic for venereal diseases and treated for gonorrhea, and the patient on admission to the hospital had a temperature of 102.3-5, she had profuse vaginal discharge, the mucous membranes around the vagina and within around the cervix were all inflamed, slightly edematous, the smear showed positive gonococci; vaginal and pelvic examination showed tenderness in both sides of the pelvis; she had a tender abdomen. The patient was returned to the ward and I diagnosed that this patient had gonorrhea, that she had salpingitis and that with rest in bed I predicted the fall of her temperature and subsequently we would operate and remove those tubes.

It all followed up to the last three words. We did put her to bed, her temperature did drop to normal after several days, she did feel better, her tenderness did subside, we did take her to the operating room, we did open her abdomen, and we found that she was pregnant and she did not have any sign of salpingitis. The uterus was plugged into the pelvis. One of the ovaries seemed to have been caught down alongside of it, and so her pain had been due to the compression of the ovary, just as a testicle would ache if it were compressed; and her temperature was due to her gonorrheal infection.

That is just an example of what could happen in our diagnosis and that might happen to any of us. I bring it up so that those of you who have made errors in pelvic examinations, will not feel so badly about it.

Howell J. Davis, (in closing): Gentlemen, I have very little else to add. I appreciate your kind attention and your discussion. I agree with Dr. Lukins in his remarks, and I think Dr. Abell's 66 per cent diagnosis of tubal pregnancies is excellent.

Speaking of errors of diagnosis in pelvic examinations, I have heard often—so far I haven't experienced it—of failure to have the bladder empty when the pelvic examination is made and the patient comes to operation for a large ovarian cyst, the cyst being removed usually by catheter after the abdomen is opened.

THE STATE HOSPITAL PROGRAM*

J. G. WILSON, M. D., Director,
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Frankfort.

The first hospital devoted exclusively to the care of the insane in our country was opened at Williamsburg in the colony of Virginia, on October 12, 1773. The second was at Lexington, Ky., in 1824. Kentucky was therefore, the first state in the Union to build a hospital for the exclusive care of the mentally ill. In 1854, a second institution was opened at Hopkinsville. In 1861 the Institution for Feeble-Minded was established at Frankfort. In 1873 a reformatory at Lake-land was converted into a third state hospital, and there is now in process of construction a fourth, near the shores of Herrington Lake in Boyle and Mercer Counties.

Doctor Samuel Hamilton, of the National Committee for Mental Hygiene New York City, who studied the Kentucky State Institutions one year ago, says in his report to the Mental Hospital Survey Committee, that the histories of these four institutions were "professionally creditable until the 1890's when a political overturn brought in an administration that grasped for such rich spoils. After the World War, there was a period in which considerable advances were made, and remnants of that period still survive in the sprinkler system in one hospital, an operating room in another and a Pasteurizer in a third."

Since our advent on the scene, we have unearthed still further survivals. For example we found the nucleus of occupational therapy

in all the institutions, unused and dismantled hydrotherapy equipment in three, and a fairly good system of keeping clinical records in one.

It would be a waste of time to recount to this audience the various preliminary steps which have been taken within the last six months to remedy the conditions mentioned in Doctor Hamilton's report, and the special legislation designed to carry out its recommendations. As you are all familiar with that report, I shall confine the remainder of my remarks to a discussion of the proposed mental hygiene and hospital program under the provision of the Chandler-Wallis Act, dividing the subject into two separate headings, to-wit:

1. Changes in the techniques of administration and treatment of hospital patients.

2. Extension of the mental hygiene program to the communities and homes.

1. CHANGES IN THE TECHNIQUES OF ADMINISTRATION AND TREATMENT OF PATIENTS

In each one of the three institutions for the insane, we have either actually set up, or are in the process of setting up, a medical staff consisting of the Superintendent, Clinical Director, one Senior Physician, two Junior Physicians, one or two internes, and one Dentist. All these will be full time employees, and at least three of the six must have had previous training and experience in psychiatry. One must be a woman. In addition, we plan gradually to enlarge our consulting staff. The foregoing plan will give us approximately one physician to each 350 patients.

The nursing staff now consists of a supervisor of nurses with previous training in psychiatric nursing, and two graduate registered nurses serving under her.

The supervisor of nurses is in general charge of all attendants on both the male and female sides of the hospital, and is directly responsible to the clinical director or the Superintendent if the latter so desires. The number of attendants is being gradually increased, and more care is being exercised in their selection.

It is planned to increase our laboratory force, including X-ray technicians. However, we expect to go slowly in this respect for two reasons; first we already have the nucleus of a good laboratory set up, including personnel, in all the institutions, except the one for the Feeble Minded; and second, the State Board of Health performs all our serological tests and furnishes us prompt reports. It would be foolish for us to duplicate their good work.

You will note that the reorganization of

*Read before the Kentucky State Medical Association, Louisville, October 3-6, 1938.

the personnel does not call for an assistant superintendent. There is, however, a business manager, who reports directly to the superintendent and assumes many of the administrative responsibilities usually devolving upon assistant superintendents.

In addition to the medical and nursing personnel, we have provided for the employment of better trained dietitians, more efficient occupational therapists and the re-establishment of social welfare work. So far no social welfare workers are actually on duty. We desire to go slow in this respect and not employ field workers until the superintendents and clinical directors have properly studied and classified their patients.

This study and classification will necessarily take some time. At the Eastern State Hospital, nearly every history must be rewritten and at the other institutions they should be rewritten if the proper diagnosis and classification is carried out as planned.

The body of work which the newly organized personnel has before it, is enormous, and will for many months to come, tax their patience and resources to the limit. I have faith that they will succeed. I know that they will if they can feel assured that they are entering upon a long time program, one that will endure indefinitely, and not be scrapped by a new administration or outlawed by repealing legislation.

I have not yet mentioned the need for new equipment, the installation of modern techniques of treatment, and our plans to establish them. We believe that these are important, and after the matter of personnel is satisfactorily adjusted we will proceed with them as rapidly as possible; but in the meantime, why should we spend the public money in buying tools for persons who do not know how to use them? By this, I especially refer to shock treatments produced by insulin and metrazol therapy. We already have two supervisors of nurses who have had the necessary experience for nursing these cases, but so far, there is not a single physician on any of our hospital staffs who has had any experience with these therapies; and the most of them have never even seen them applied.

It seems to be impossible to find otherwise acceptable men with this training who are willing to work in our hospitals. The only way out of this dilemma will be to train some of the men already in the service. Doctor Baber, the Superintendent of Longview State Hospital at Cincinnati, has kindly offered to train any number we send to him for this purpose, giving them room and board without cost for a month or six weeks, during which time they should certainly be

able to learn the techniques of administration, acquire the art of intelligent observation of the treated patient, and come away with a full sense of the grave responsibilities involved in this often successful, but always potentially dangerous form of treatment.

Other forms of modern therapy are planned and some of them are already off to a good start. At Eastern State Hospital two continuous tubs are in daily use, as well as two pack tables. We are fortunate in having a trained hydrotherapist among our employees at that institution.

Dr. Phillips has just laid on my desk a report on the hydrotherapy treatments at Eastern State Hospital last month. There were 585 of these treatments given to 73 different patients in one month at the Eastern State Hospital, the month ending September 30, as compared with none at all a few months ago. The tubs were dismantled and in the cellar. I found some of them had been left down there for years. We brought up two, hooked them up with the plumbers help, put in two pack tables and started hydrotherapy with the results I have just read to you. It might be interesting to note that of these 73 patients treated last month, 10 went home paroled. Those statistics are crude. I don't know just how much of a factor hydrotherapy was in their recovery, but it is at least interesting to know that 10 went home paroled. I don't know, but I do not believe if those 73 patients had been receiving camisoles and restraint instead of continuous tubs that 10 of them would have gone home paroled.

Malarial treatment for paresis is already under way on a small scale at all three institutions for the insane and will be extended as rapidly as possible. The techniques of anti-syphilitic treatment have been reorganized to make them conform to U. S. Public Health Service standards.

At the Institute for Feeble-Minded, we have made a good start in carrying out the plan to develop every patient up to the limit of his intellectual capabilities and special vocational aptitudes.

An educational director and two trained psychologists are on the job, three additional teachers have been employed, making ten in all; and on the 10th of October a field psychologist will report for duty.

Additional attendants have been employed in order that small selected group supervision can be made instead of the large heterogeneous group supervision previously practiced.

The program for the Feeble Minded Institute contemplates extending the parole system as rapidly as possible, and the development of a field service for its supervision.

Our hospital program contemplated, not only the establishment and organization of an efficient personnel, but also the correction of certain defects in administration and housekeeping. Prominent among the former were the paucity of adequate case histories, the almost complete absence of progress notes, lack of systematic instruction of attendants, incomplete or misleading physical examinations, neglect of precautions to prevent the spread of communicable diseases, a haphazard, badly organized admission service, favoritism towards patients for political, social or other reason, frequent physical abuse of disturbed patients, improper methods of feeding, neglect of physical ailments and diseases, practically no attention to the teeth, unsanitary milk production, carelessness in the use and custody of narcotic drugs, and neglect of recreation and religious service. Every one of these abuses has received our attention, and some progress has been made in correcting the most of them.

Prominent among the housekeeping abuses, were the bed bugs and rats. At Eastern State Hospital two months ago, scarcely a night passed by when some patient's feet were not bitten by rats. In one week we caught 175, and the rat evil was combatted successfully, not only by trapping and poisoning on the part of the paid personnel, but by cooperation of intelligent patients, who put pieces of cheese on strings, and hung them on the foot of the bed, rightfully believing that if rats were given an opportunity to select from the bill of fare, they would prefer well processed and intelligently ripened bovine cheese to unwashed, raw human toes.

At the same hospital the bed bugs no longer infest the offices of the physicians; they have been run out of them entirely and they are now on the run in the wards. The supervisor of nurses at that institution informs me that she now only finds 3 or 4 every day, whereas formerly they ran into the hundreds.

At three of the four institutions there is a feeling of hope and confidence and we look for this same change for the better at the fourth one in the near future. The morale has changed. The attendants are now interested in their work as well as their jobs. The physicians are perking up. Requisitions for Medical Journals and scientific books are coming in so fast that the budget can't stand the strain.

The time is too short to mention all the proposed major changes or to recount in detail the already accomplished small ones. Supervision of medical and psychiatric serv-

ice for the penal and correctional institutions is provided for in the new law, but how far this shall extend or what actual authority the Mental Hygiene Division will have in the matter are details which have not yet been worked out.

II. EXTENSION OF THE MENTAL HYGIENE PROGRAM TO THE COMMUNITY AND HOME

I shall now take up the second heading of my paper which deals with the extension of the mental hygiene program to the community and the home.

The mental hospital should be made the center from which all mental health work throughout its district is extended. Our program contemplates such an extension along the following lines:

(a) Methods to facilitate early return of the patient to the community.

(b) Methods to prevent unnecessary commitments to institutions.

Under (a) we have six fields of action:

1. Investigation of the home life and economic status of the patient.

2. Cooperation with local agencies, county health authorities, and Division of Child Welfare in the Department of Welfare.

3. Utilization of old age pensions to help in the home care of a few carefully selected cases of senile psychosis.

4. Investigation of the pauper idiot act so that it may gradually be converted into a constructive agency for the home care of certain carefully selected feeble minded children.

5. Conferences with the judges of the courts who originally committed the patient, with the view of securing their advice and cooperation in preventing unnecessary commitments to institutions.

6. Mental hygiene clinics for treatment of paroled cases.

Under (b), that is, methods to prevent unnecessary commitments, we have the following fields of action:

1. Enforcement of existing law, which allows the superintendent to refuse to receive a patient if he is not really insane.

2. Education of the local communities and families to a sense of personal responsibility in the case of the alcoholic, and the old fathers and mothers who suffer from mild forms of harmless dementia, which though troublesome are not dangerous.

3. Cooperation with the courts to the end that competent psychiatric examinations be insisted upon before a commitment is actually made.

4. Case studies of the feeble-minded on the "waiting list" for admission, with the view of selecting those where commitment is the only proper procedure, and providing for home care for the others.

5. Utilization of the mental hygiene clinics established for the treatment of paroled cases, to the end that they may also treat mild mental disorders which have never been committed, and prevent the necessity of commitment if possible.

In all these plans we must not lose sight of the fact, so often reiterated by every one who has had experience in this field, that our plans must not be for a year, or for the term of one governor, but they must be so laid that successive administrators will recognize their value and each incoming governor, and every new session of the legislature, regardless of political complexion, will agree that the Mental Hygiene field is not to be plowed for patronage, but tilled for the production of sound minds.

But the present must also be considered as well as the future, for no law will enforce itself. Constant vigilance is necessary to prevent slight irregularities and these small irregularities establish precedents for larger ones. In conclusion I quote the words of St. Paul in his epistle to the Hebrews:

"For if we sin willingly after that we have received knowledge of the truth, there remaineth no more sacrifice for sins,

"But a certain fearful looking for of judgment and fiery indignation, which shall devour their adversaries."

DISCUSSION

Spafford Ackerly, Louisville: Knowing the author of the last paper as I am privileged to, I would say that the flavor and character of this splendid presentation are distinctly Wilsonian. It reads as he talks—simply, lucidly, straightforwardly, like a military dispatch. This message on the one hand is a message of good cheer from the front concerning our state hospital situation, and on the other hand a note of warning that the medical and psychiatric standards of these great hospitals will always be in jeopardy unless the doctors of the state assume the responsibility of fostering scientific care for the mentally sick.

Dr. Wilson, I fear, is presuming too much when he thinks we have all read the Chandler-Wallis Act, passed unanimously last spring in a special session of the Kentucky Legislature, an Act which takes the hospitals out of politics, establishes qualifications and tenure for personnel and in general bids fair to change our hospital from custodial institutions to hospitals for the treatment of the mentally sick. But all of us should read the Chandler-Wallis Hospital

Act. Having had part of my training in a state hospital, I can assure you that it is a refreshing document. When one is finished reading it, he should read that part of the Reorganization Act of 1936, Article X, Section 4618-90, page 2480 of Carroll's Kentucky Statutes. If one will read this carefully, he will see that it is possible for a superintendent of a state hospital to have charge of his own hospital and of those who work for him, but only if the spirit of this Article of the Reorganization Act and not just the letter is carried out.

I merely wish to go on record as being aware of this as an illustration of how we doctors must ever be on the alert to see that the high spirit of hospital legislation in this state is being carried out.

Much has been accomplished by Dr. Wilson and his assistant, Dr. Kasey, since that time, with the help of Governor Chandler, your president, Dr. McCormack, and Dr. Abell, and yet compared with the long-time program Dr. Wilson has mapped out for the future, he must feel that he has only just begun. His job from the first has been beset with almost insuperable difficulties and not without personal danger that would have crushed the morale of an ordinary man, but soldier that he is, Dr. Wilson is sticking to his post and I think he will give up only when the job ceases to need him or he is completely blocked. He is not going to stop when the new hospital is built, fine as that ought to be; he wants effective administration, better medical and psychiatric diagnosis and treatment of the patients within these hospitals. Nor is he going to stop there. He realizes that the mental hospital must reach out into the community with a program of prevention, tapping all the public health and social welfare resources of the state in so doing. Little wonder that there is a new atmosphere in our state hospitals today, that engenders a feeling of hope and confidence that the future promises better treatment for the patient, more trained doctors to share the heavy load, internes and nurses to carry out their instructions, and tenure of office befitting the dignity of able physicians who have chosen psychiatry as their life work.

Thomas J. Crice, Louisville: I would like to direct a few remarks about the care of our mentally sick that our institutions have cared for over the long period of their stormy history, and let me say with all kindness we should remember the men and women who have labored in these institutions practically throughout their history — they should not be forgotten. Should we not give credit to those that have passed on to their reward and be mindful of those that are living, that have given their

best; yes, some have given their all for the care and protection and good name of our institutions for the insane.

Relative to trained personnel, it is my thought that young men coming into the profession from year to year should be encouraged to take up this work and seek internships that would give them the proper scientific training. It would then not be necessary for Kentucky to call upon various other states to furnish psychiatrists for Kentucky's hospitals for the mentally sick. In this connection, I wonder what the medical profession of other states would think if we should send out an SOS for surgeons, obstetricians, gynecologists, to come to Kentucky, saying we have no one that is well versed, with abilities and capabilities, in the above mentioned fields.

In reference to the commitment of mental cases, I have long thought that competent psychiatrists should make thorough examinations in these cases in order that the jurors could thoroughly understand just what type of insanity the person in question was suffering from and ever remembering that jurors are laymen. Where a case is in doubt or there is some protest, our well-organized psychopathic department in the Louisville City Hospital is always ready to cooperate, and I desire to commend this department to you.

Our jury system in passing upon the sanity or insanity of any individual is antiquated, and we hope will be entirely eliminated in the future. It was my privilege a short time ago to visit a psychopathic court in Los Angeles, California. This court was composed of two psychiatrists, one judge and a county attorney. The clinical data in their cases was prepared the day before the hearing. The judge's procedure was as follows: He would ask the patients many questions pertaining to his mental illness and he in turn would consult frequently with the psychiatrist. This procedure seems to bring out much of the data that is necessary. The patients themselves or any member of the family could ask for jury if they desired. This court was void of spectators and other unnecessary nuisances often seen in our court rooms when a lunacy inquest is in progress.

Relative to the new treatment for dementia praecox, the so-called shock treatment together with the new therapy for paresis, I would like to remind you that these treatments have a great deal of promise, but a number of workers in this new field are not yet ready to declare the treatment a cure-all. We need more scientific study and investigation in this field and ere long the diseases of the mind will be eliminated. "Insanity should not be; it is unnecessary and could be prevented and will be cured" is a

beautiful dream in the humble speaker's opinion. Insanity, like the poor, will always be with us.

A. T. McCormack, Louisville: It is my conception that the medical profession is primarily responsible for the mental and spiritual health of the people of the state as well as for the bodily health of the population. It is wholly inconceivable that any intelligent people could have been guilty of the high crimes that we have committed as a commonwealth in the conduct of our so-called hospitals for the insane in the past. This is no reflection on either the patients who were mistreated or not treated at all, or on the personnel enmeshed in the system, who were punished far more severely because they held these positions and sacrificed themselves and gave their service than we can imagine.

The sincere physicians (and almost all of these men tried their best) found themselves mixed up in a political system where they were held responsible for the delivery of precincts or wards or communities rather than for the delivery of medical service, and they suffered the tortures of the damned. Fortunately, that day is over.

It is important that we give to Governor Chandler and Dr. Wilson our intelligent support. We can do that only by knowing about the program so that we can help to concentrate public opinion in support of the program.

There will be no difficulty about Governor Chandler, but it is of the utmost importance that we impress on future governors and candidates for the governorship that the intelligent people of this state will be informed as to any dereliction of duty. There must be no building of political machines by anybody, subordinates or anybody else, in any one of our institutions in the future, and if there is the Kentucky State Medical Association has already served notice in the reports that it has adopted that it will bring them immediately to public attention and bring the deserved disfavor of its citizenship upon anyone who is found guilty of such dereliction of duty.

I hope all of you will read the very remarkable article in the October issue of the JOURNAL, by Dr. Luce of Detroit, which I had the privilege of hearing delivered before the Section on Public Health at the San Francisco meeting of the American Medical Association. I induced Dr. Luce to permit us to publish this paper and he did so because of the new program in Kentucky. It is recognized by psychiatrists everywhere as a hope for a better development in psychiatry, not merely in this state but in all the states.

There is just one other thought I want to give

you. Our people throughout the ages, familiar with family physicians, have called their family physician for everything; that is what they ought to do. As specialists have developed, we in the profession have too frequently failed to realize that those of us, however well qualified in general practice or in our particular line of activity, are not qualified to become specialists in psychiatry. It takes special study, it takes a special type of mind, and it is of the utmost importance that we realize that, when we, as the guardians of the health and medical service of the people of Kentucky, want somebody to treat mental ills, we want somebody who is qualified to treat those ills and who devotes himself and intends to devote himself throughout his life to the specialty of psychiatry.

Miss Linda Neville, Lexington: I have studied the new law and also Section X, which is retained from the Reorganization Act of 1936. It appears to me there are great conflicts in those two laws, and I would like to ask Dr. Wilson whether in actual practice he has found any conflict between the Reorganization Act, Section X, personnel division, and the present law. It would mean a great deal to have him elucidate that question.

J. G. Wilson (in closing): I will close the discussion by trying to answer Miss Neville's question. I am going to answer it by saying that I don't know how to answer it; I can't. It would take a lawyer, it would take the Attorney General to answer it. But of one thing I am certain, and that is that the spirit of the Reorganization Act is not at all in conflict with that in the Chandler-Wallis Act, and I am also profoundly impressed with the belief and the confidence that Governor Chandler wants to see the spirit of the Reorganization Act as well as the spirit and letter of the Chandler-Wallis Act carried out. It takes time and patience to get anything across, and I think none of us should be too impatient with anybody. I think it will all come out all right as far as that is concerned.

Clostridium Welchii in Genital Tract—Bysshe took anaerobic vaginal cultures in 547 patients and positive *Clostridium welchii* cultures were obtained in twenty-five, or approximately 4.5 per cent. The five patients who had positive cultures in the antepartum clinic showed no evidence of infection or morbidity in the puerperium. Of the nineteen patients from whom positive cultures were obtained during the puerperium, only eight showed morbidity, i. e. a fever of 100.4 F. or more. Five of these had evidence of endometritis and the Welch bacillus was cultured from the genital tract.

THE PROPHYLAXIS AND TREATMENT OF TETANUS*

WILLIAM T. MAXSON, M. D.

Lexington.

Tetanus is an acute infectious disease caused by a soluble toxin elaborated by the *Clostridium tetani*, a spore forming, anaerobic bacillus. The disease follows infection of a wound by the spores of this organism. Deep puncture or lacerated wounds are most favorable for the development of the spores. Occasionally minute wounds have been followed by tetanus. The presence of necrotic tissue, foreign bodies, and secondary infection seems to enhance the chance for tetanus to develop. Tetanus is particularly prone to follow powder burns.

It has long been thought that the toxin was carried from the wound site to the central nervous system along the nerve trunks. However, Abel (1) and his associates have shown that the toxin is absorbed by the blood and lymph, and reaches the central nervous system by the blood alone. In addition the toxin absorbed by the lymphatics near the site of infection has a direct action on the muscles, probably at the neuromuscular junction. This effect on the muscles explains local tetanus. They feel that local tetanus is more common than is realized, and that it frequently occurs before general tetanus. Abel (2) and his associates substantiated the belief that the toxin is rapidly tissue fixed within five to seven hours, and once fixed cannot be extracted from the tissues. An emulsion of the spinal cord of an animal dying with tetanus will not produce tetanus when injected into a susceptible animal. They (3) discovered, contrary to the general belief, that fixed toxin could be neutralized by antitoxin. Animals were given one or more lethal doses of toxin, and time was allowed for this toxin to become tissue fixed. These animals could be saved by giving an abundance of antitoxin, provided it was given before signs of descending tetanus appeared, but if given after signs of descending tetanus appeared all the animals died no matter how much antitoxin was given. Animals receiving less than a calculated lethal dose of toxin always recovered whether they received antitoxin or not.

The value of passive immunization is too well known to require much comment. We would like to stress the importance of giving antitoxin to burned cases, particularly to those with tannic acid crusts.

Active Immunization: Since 1918 at-

*Read before the Kentucky State Pediatric Society.

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tempts have been made to secure some active immunization against tetanus. An advance was made in 1925 when Ramon made a tetanus toxoid. Many papers have been published since that time reporting the results of its use. At the present time an alum precipitated toxoid is most frequently used. Sneath (4) found that individuals injected with the usual prophylactic dose of 1500 units of tetanus antitoxin have a maximum antitoxin level of from 0.1 to 0.25 units per cubic centimeter of serum. He (5) gave 29 persons doses of plain toxoid and significant amounts of antitoxin developed in 28 of them, and in 20 of them it reached a titre of at least 0.1 units per cubic centimeter of serum. He (6) gave a secondary stimulating dose to 14 persons about a year after the primary series and found all showed rapid increases of antitoxin within a week. Thirteen of the group attained or exceeded an antitoxin titre of 0.1 to 0.25 units per c.c. of serum.

Sneath and Kerslake (7) found that when, a fourth, or stimulating dose was given two years after the primary series of injections, a marked response occurred. The antitoxin titre rose from 10 to 500 times the level it had been two years before, after the first series of injections. Only one of this group of 12 had less than 0.1 units of antitoxin per c.c. of serum. Serum was taken from ten persons a year after the secondary stimulating dose of toxoid, and only one failed to retain 0.1 unit.

Jones and Moss (8) found a secondary stimulus a year after the initial immunization increased the antitoxin 20 to 50 times that produced by a prophylactic dose of antitoxin.

McBryde (9) gave two 1 c.c. doses of alum precipitated toxoid 73 days apart, and 54 days after the second dose, none of the 85 children tested showed less than 0.1 unit of antitoxin per c.c. of serum. The majority had considerably more than that amount.

He states in his paper that "these individuals have received a basic immunity to tetanus toxin which in the presence of artificial stimulation or actual infection causes them to respond with rapid antitoxin formation."

The Journal of the American Medical Association (10) comments on Gold's (11) findings in the following words: "a protective titre of one or more units develops in from 5 to 14 days after the injection of a second dose of alum precipitated toxoid, even when the latter is given two years after the first dose. The duration of this protective level varies however, and may disappear within ninety days, or may last for over two years. The antitoxin titre can be raised to a pro-

TECTIVE level by a further injection of alum precipitated toxoid."

Alum precipitated tetanus toxoid can be given in combination with alum precipitated diphtheria toxoid.

It must be remembered that tetanus has developed from such trivial wounds that antitoxin might not have been given at the time, even had the patient been seen by a physician. Serious and even fatal reactions have occurred in allergic children after injection with animal sera. Of course there is as yet no test for the susceptibility or immunity to tetanus as there is for diphtheria, and until that day comes, if ever, it would probably be wiser to give prophylactic antitoxin to all those with suspicious wounds. It would probably allay some of the physician's worry to feel that the child had some measure of active immunity to this disease, and he would be more apt to give a third dose of toxoid, than a second dose of horse serum to those with wounds of doubtful status. Bovine antitetanic serum may not be readily available.

THE TREATMENT OF TETANUS

There are about 1500 deaths from tetanus each year in the United States. In civil life it is most often found in children. The largest percentage of Calvin and Goldberg's (12) cases were between the ages of 10 and 15. It has been shown by numerous people that antitoxin has not appreciably affected the mortality rate once tetanus has developed. It was not a universally fatal disease before the days of antitoxin, some 30% of the cases recovering. The disease had a mortality rate of 90% if the incubation period was less than six days and 50% mortality rate if the incubation period was over 10 days (13). Calvin and Goldberg (12) showed a mortality rate for Cook County Hospital to be about 75%. Huntington, Thompson, and Gordon (14) in their series of 642 case histories found the mortality rate of the cases receiving no antitoxin approximated the mortality rate of the whole series. The untreated group mortality was 65.3%. It was 58.6% in those receiving less than 10,000 units of antitoxin, and 66.1% in those receiving more than 10,000 units. They found that large or small doses of antitoxin had little to do with the prognosis, and that the effect of any antitoxin at all was not great, but that the incubation period and the duration of symptoms prior to admission must be considered in evaluation of the prognosis, but the latter is most important. Hippocrates 2400 years ago made somewhat similar observations.

Numerous drugs have been used to control the convulsions of tetanus. Many of the barbiturates have been used, as well as chloral hydrate, paraldehyde, morphine, and numerous other drugs. In the series of eleven cases to be presented Avertin (Tri-bromethanol) was used in most of them. A solution of this drug was instilled in the rectum.

Eleven cases of tetanus have entered the Children's Free Hospital in Louisville from April 1933 to October 1938.

1. W. M., Age 11, Male. Admitted 4-6-33. Wound, cut on knee. Incubation period 12 days. Onset 5 days previous to admission. Symptoms, Abdominal pain. Examination: Rigid abdomen, slight trismus, stiff neck, slight opisthotonus, and few convulsions. Treatment: Antitoxin 40,000 units, half intravenously; half intramuscularly. Wound on knee treated and cleaned. Sedative: Chloral hydrate 8 to 10 grains every three to four hours. Also received some sodium amytal. Recovered.

2. W. K., Age 13. Male. Admitted 8-23-35. Wound on heel six weeks previously. Two weeks later had some stiffness and sore jaw but recovered. Since 8-18-35 (five days) symptoms of general stiffness and slight trismus. Examination: Numerous impetiginous lesions on skin, generally rigid, marked trismus, board like abdomen, abrasion on heel.

Treatment: Avertin 80 mg. per kilogram Antitoxin, 20,000 units intravenously, and 40,000 units intramuscularly. Wound cleaned. Found it was necessary to increase the dose of Avertin to 90 and then 100 mg. per kilogram, which was given every 8 to 10 hours. On 9-10-35 became cyanotic, with shallow irregular respirations, but improved after stimulants. Eventually recovered.

3. D. W., Age 11, Male. Admitted 8-31-35. Wound, Nail puncture on ball of foot. Had been treated with tincture of iodine. Incubation period 5 days. Symptoms on 6th day, of abdominal pain, and soreness of jaws, and slight trismus. Examination: Was in pain. Had trismus, board like abdomen, moderate opisthotonus. Wound on foot. Treatment: Avertin 60 mg. per kilo. with practically no alleviation of symptoms. Antitoxin 10,000 units intravenously and 20,000 intramuscularly. Had to raise dosage of avertin from 60 to 80 and 100 mg. per kilo. every six hours. Debridement of wound day of admission. Gradually improved and discharged 9-30-35. Was fearful about leaving hospital. Given phenobarbital tablets at home,

but returned to the hospital in three days with recrudescence of all symptoms. Controlled by chloral hydrate twice daily. Recovered after ten more days.

4. J. P., Age 10, Male. Admitted 10-4-36. Wound: Puncture wound in foot (nail). Incubation period, four days. Symptoms: Backache, pain in neck, and on 10-3-36 had general convulsions. Local physician gave him 10,000 units of antitoxin. Convulsions continued on 10-4-36. Examination: In great pain, trismus, opisthotonus, board like abdomen, skin covered with cold sweat, puncture wound in heel. Convulsions with slight stimulus. Treatment: Avertin 80 mg. per kilo. Antitoxin 20,000 units intravenously. Debrided wound. Avertin had to be increased to 90 and then 100 mg. per kilo. He occasionally became cyanotic but was relieved by avertin, given every 6 hours. On 10-9-36 developed bronchopneumonia, had marked cyanosis. Put in oxygen tent. Rales throughout chest, 10-11-36 given additional 20,000 units of antitoxin intramuscularly. Position changed frequently. Had to raise foot of bed to drain mouth and pharynx. Gave him sodium pentobarbital (nembutal) but did not relieve him, had to use avertin to prevent convulsion. He eventually recovered.

5. M. C., Age 11, Male. Admitted 10-11-36. Wound: Hit in head by thrown baseball bat, or a stick used as a bat. Momentarily unconscious. A physician sutured a three inch laceration in the scalp. Because of frequent vomiting was taken to private hospital in Louisville. X-ray disclosed a skull fracture. Sent to Children's hospital. Examination: Was somewhat stuporous, had some difficulty in swallowing, was very stiff, and restless, with a marked risus sardonicus, board like abdominal wall. There was a depressed fracture of the skull. Scalp surrounding it was necrotic. Fracture was two inches long and from 1-4 to 1-2 inches wide. Dura was plainly visible. Several pieces of wood from 1-2 to 3-4 of inch long were removed from under the scalp and some from the surface of the dura. Wound had a foul odor. Was given 60 mg. per kg. of avertin, and 20,000 units of antitoxin intravenously. Patient died in six hours. Cultures of the wood, and cultures taken from the surface of the cerebrum at autopsy showed *Cl. tetani*, and *B. Coli communior*. Several small pieces of wood and hair were found inside of the skull.

6. W. D., Age 8. Admitted 10-28-36. Wound: Puncture wound of left foot.

Incubation period 19 days. 10-26-36 complained of pain in lumbar region, then general stiffness, and some trismus. Convulsions on 10-27-36. Examination: Frequent convulsions, stiff neck, trismus, ulcerated wound sole of left foot. Treatment: 80 mg. per kg. of avertin. Wound debrided. Antitoxin 20,000 intravenously. Still having convulsions so given grains 3 of sodium pentobarbital (nembutal). Given 100 mg. per kg. of avertin. Became somewhat cyanotic, put in an oxygen tent. Died in a few hours.

7. R. H. Age 8. Male. Admitted 7-7-37. Wound: Week prior to admission stuck a dry weed in sole of right foot. Wound was treated with kerosene and turpentine. Weed remained in foot for three days. Incubation period six days. Symptoms: Stiffness of calf muscles on right and right side of abdomen, and back. Examination: Convulsions, marked trismus, and wound on sole of foot. Treatment: Sedatives. Sodium phenobarbital 4 grains intravenously. Wound debrided. Antitoxin 10,000 units intravenously. Dose of sodium phenobarbital was repeated. Next morning had rapid sighing respirations, and respiratory difficulty. Given avertin. Condition steadily became worse till death. Died after 12 hours in the hospital.

8. M. N. Female. Age 7. Admitted 7-8-37. Wound: Stumped toe ten days prior to admission. Incubation period, four days. Symptoms: First pain in foot, and then backache which persisted for six days, gradually becoming worse. Then unable to open jaws, followed by general spasticity and abdominal pain. Examination: In great pain, general spasticity, marked trismus and opisthotonus. Avertin, Antitoxin 20,000 units. Wound debrided. Following day given sodium amytal 3 grains, and then sodium pentobarbital (nembutal). This last drug was used in grain and half doses 6 to 7 times daily. Avertin was used several times. Under sedation for twelve days. Recovered.

9. G. M., Male, Age 4. Admitted 8-24-38. Wound: A nail in foot 17 days previously. Discharged pus for a week. Incubation period: Fifteen days. Noticed on 8-22 patient was unable to open mouth, and on 8-23 legs were stiff. Examination: Trismus, marked spasticity, and one convulsion. Wound on sole of foot. Avertin 100 mg. per kg. four times a day. Antitoxin: 50,000 units intramuscularly. Wound debrided. Used avertin for five days, then on phenobarbital. Cl. tetani, and Cl. Welchii were isolated from wound. Recovered.

10. H. S., Male, Age 10. Admitted 9-1-38. Wound: Splinter in buttock. Was not re-

moved for three days. Incubation period 13 days. Onset of symptoms nine hours before admission with pain in back, neck, and chest, with stiffness of muscles of face, neck and back. Examination: Very spastic and in pain. Covered with perspiration. Had opisthotonus, rigidity of abdominal wall and stiffness of all muscles. Avertin given, and wound debrided. Antitoxin given, and avertin given again but expelled. Had labored respiration, and cyanosis. Put in oxygen tent. Given sodium amytal gr. 3. Became steadily worse till death. Positive culture for *Clostridium tetani* from debrided tissue.

11. A. L., Male, Age 6. Admitted 9-30-38. Wound: Smallpox vaccination four weeks previous. Symptoms week before admission. Soreness of masseter muscles, difficulty in opening mouth next day. Face seemed slightly swollen, and has remained so until time of admission. Was unable to open mouth at all day of admission. Legs were very stiff and was unable to walk. Examination: Trismus, legs spastic, neck and spine rigid. Arms spastic.

Treatment, 30,000 units of antitoxin intramuscularly, and around vaccination scar. Debridement of ulcer done under local anesthesia. 1% procaine. Avertin two doses of 60 mg. per kilo, night of admission and this had been repeated two to three times daily. Culture from wound showed Cl. tetani. Recovered.

Seven recovered and four died. All those that lived as long as 24 hours after admission to the hospital recovered. Ten of the eleven were boys. Seven of these cases received injuries to the feet, which could have been prevented by wearing shoes.

This series of cases is too short to attempt to correlate length of incubation period and duration of symptoms prior to treatment with the mortality rate. It may be noticed that those dying showed some respiratory difficulty and cyanosis usually a few hours before death. Some that lived had similar symptoms. "Death (15) from tetanus is the result of one or more of the following: Convulsions, spasm of the glottis or diaphragm, exhaustion or respiratory failure." Avertin is known to have a depressing action on the respiratory center, and it is possible that Avertin may have been the cause of some of this cyanosis. Beecher (16) feels that avertin is a toxic drug. He states, "A large dose slowly absorbed may not be toxic, while a small dose rapidly absorbed may be toxic." He feels that the rate of absorption depends largely on the height to which the injected drug rises in the colon. The Council

of Pharmacy (17) and Chemistry of the American Medical Association states that the chief danger of avertin lies in the depression of the respiratory center. Coramin, ephedrine and carbon dioxide are efficient antidotes if given in time. They also suggest washing out the rectum. They state about one death in 10,000 occurs with avertin, and usually when it is not correctly used or when used on patients with contraindications to its use. Children tolerate the drug well.

Wood and Bickley (18) feel that avertin has a wide margin of safety, but carelessness in measuring single drops may make a noticeable difference. They found slow instillation requiring ten minutes was advisable. For them coramine proved a valuable prophylaxis against cardiac and respiratory depression occasionally seen prior to the use of this drug.

We found that avertin was a useful drug to use in the treatment of tetanus. It was often resorted to when barbiturates did not seem to be relieving the patient. For best results it was usually necessary to give 100 milligrams per kilogram of body weight. We found no deleterious effects on patients under the influence of avertin for as long as two weeks. Cole (18) gave a seven day old infant with tetanus neonatorum 81 basal doses without bad effect. The baby was under the influence of Avertin for 23 days. He felt that avertin was a very useful drug in the treatment of tetanus.

Antitoxin: All our cases received antitoxin. One case received as much as 60,000 units and all the rest received smaller amounts. The majority received from 20,000 to 40,000 units. All received tests for sensitivity to horse serum before antitoxin was given. Most of the cases received antitoxin intravenously as we felt that the rapidity with which the antitoxin reached the circulation was more important than the total amount given. No antitoxin was given intrathecally. Intrathecal serum always causes a meningeal irritation and we felt that it was contraindicated. It is known that when large amounts of serum are injected into the subarachnoid space that it is rapidly and almost completely transferred to the general circulation. Abel (1) feels that injection of antitoxin into the subarachnoid spaces is futile and unnecessary. Advocates of enormous doses of antitoxin may sometimes lose sight of the fact that one unit will neutralize 1000 lethal doses of toxin for a 350 gram guinea pig.

Taylor (15), and Gage and DeBailey (19) have stressed the importance of surgical

treatment of the wound. Taylor frequently found foreign bodies in wounds apparently healed, and advises debridement in exploration for foreign bodies, even in the apparently healed wounds. We cleaned and completely debrided all our wounds. We often found small pieces of dirt or other very small foreign bodies, but in one case, No. 5, found a large foreign body.

General Care: Patients with tetanus need constant nursing care. In all our cases food and fluid was administered by nasal gavage. Usually the gavage tube was left in place for several hours, and then taken out and placed in the other side of the nose. If the gavage tube is kept in place too long it will cause some local irritation. By gavage it is not difficult to keep up an adequate caloric intake and at the same time give sufficient fluids. Those patients under the influence of sedatives had their positions changed frequently, and were often given inhalations of carbon dioxide to attempt to prevent hypostatic pneumonia.

SUMMARY

1. Abel and his associates have shown that the tetanus toxin reaches the central nervous system by the blood stream only, and toxin absorbed near the wound site has a local effect on the muscles. They have also shown that a calculated lethal dose of toxin fixed by the tissues could be neutralized by antitoxin, and the animal's life saved provided the antitoxin is given before signs of descending tetanus appear.

2. Active immunization against tetanus is a valuable procedure. The antitoxic titre is as high or higher in almost all individuals following two or more doses of tetanus toxoid, than it is following the injection of 1500 units of tetanus antitoxin. A second or stimulating dose of alum precipitated toxoid, following a primary series of injections of toxoid, will rapidly bring the serum titre to a protective level against tetanus.

3. The use of antitoxin in the treatment of tetanus has not appreciably lowered the mortality rate.

4. Eleven cases of tetanus in children were reported. Ten of the eleven were boys. The majority were from nine to twelve years old. Four developed tetanus from minor wounds. Seven lived and four died. All those who live 24 hours after admission to the hospital recovered.

5. None received more than 60,000 units of antitoxin. Only one received that much. All antitoxin was given intravenously or intramuscularly.

6. Avertin (tribromethanol) is a useful drug in the treatment of tetanus.

7. Nursing care is very important in the treatment. All food and fluids can be given by nasal gavage.

BIBLIOGRAPHY

1. Abel, J. J., Evans, E. A., Hamphil, B. and Lee, F. C. *Bul. Johns Hopkins Hospital* 56-84, Feb. 1935.
1. Abel, J. J., Hamphil, B. and Jonas, A. F. Jr. *Bul. Johns Hopkins Hosp.* 56-317 June 1935.
1. Abel, J. J., Hamphil, B. *Bul. Johns Hopkins Hosp.* 57, 343, Dec. 1935.
2. Abel, J. J., Hamphil, B., Jonas, A. F. Jr., and Chalian, W. *Bul. Johns Hopkins Hospital* 62-522, May 1938.
3. Abel, J. J., and Chalian, Wm. 62-610, June 1938. *Bul. Johns Hopkins Hosp.*
4. Sneath, P. A. T. *Canadian Public Health Journal* 25, 195, April 1934.
5. Sneath, P. A. T., *J. Am. Med. Assn.* 102, 1288, April 21, 1934.
6. Sneath, P. A. T. and Kerslake, E. G., *British Med. J.* 2, 290, Aug. 17, 1935.
7. Sneath, P. A. T. and Kerslake, E. G., *Canadian Med. Assn. J.* 32, 132, Feb. 1935.
8. Jones, F. G. and Moss, J. M. *J. Immunology*, 33, 565, Sept. 1937.
9. McBryde, A., *Southern Med. J.* 30, 565, June 1937.
10. *Journal of American Med. Assn.*, 111-159.
11. Gold, H., *J. of Lab. and Clinic. Med.* 23, 903, June 1938.
12. Calvin, J. K., and Goldberg, A. H. *J. Am. Med. Assn.* 94, 1977, June 1930.
13. Abel, J. J., *Science* 79, 121, Feb. 9, 1934.
14. Huntington, R., Thompson, W. R. and Gordon, H. *Annals of Surgery*, 105, 93, 1937.
15. Taylor, F. W. J. *Am. Med. Assn.* 102, 895, March 24, 1934.
16. Beecher, H. K. *J. Am. Med. Assn.* 111, 122, July 9, 1938.
17. *Journal of Amer. Med. Assn.* 109, 952, Sept. 18, 1937.
18. Wood, Paul, and Bickley, R. S. *Am. J. Surgery*, 34, 598, Dec. 1936.
19. Gage, M. and DeBakey, M., *Am. J. Surgery*, 30, 157, 1935.

CHOLECYSTITIS

INDICATIONS FOR OPERATION*

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The management of certain diseases of the gallbladder has been the subject of debate and dispute for many years. Whether it be treatment by medical measures or by surgery, or by cholecystostomy or cholecystectomy, or by immediate or delayed operations in acute infections, will not be settled by this discussion. The question is too big, and is complicated by too many factors to be settled by any one method of treatment. Therefore, the best results will probably be obtained by individualizing each case and determining by study, based on experience, whether or not operation is indicated and, if so, the appropriate time and the procedure best fitted to the case at hand. There is, however, general agreement concerning the necessity of operation in certain types of biliary disease.

TYPHOID CARRIERS. The complete elimination of typhoid fever can only be achieved by eliminating the carriers of the disease.

Since the gallbladder is the source of infection in most of these individuals, and since its removal generally results in a cure of the condition, cholecystectomy should be done as soon as it is proved that the patient is a carrier.

CHRONIC CHOLECYSTITIS WITH STONE. Another definite indication for operation is the finding of stones in the gallbladder. Frequently it is decided to remove such a gallbladder with the hope the general health of the patient will improve, and to prevent the many complications to which stones give rise. The presence of stones is ample evidence in itself of a coexisting cholecystitis and it has been frequently pointed out by Graham (1) and others that a damaged liver, or interlobular hepatitis, is a common accompaniment of cholecystitis, and is due to spread of infection from the gallbladder through the lymphatics. In addition the infection may produce renal and cardiac damage and, even in the absence of severe complications, is often the cause of gastrointestinal complaints ranging from dyspepsia to severe colic. The presence of stones in the gallbladder is frequently diagnosed before any serious complications due to their presence is manifested, and cholecystectomy at this stage can be done with negligible mortality.

Recurrent attacks of gallstone colic, without the complicating factors of common duct obstruction or acute infection, are sufficient reasons for cholecystectomy; to this most physicians and patients will agree. In the complete absence of symptoms, or where they are limited to such mild manifestations as flatulence and dyspepsia, procrastination on the part of the physician and patient often leads to severe complications, and to such damage of the liver, kidneys, and heart, that operation becomes hazardous and often fatal. It is this delay, with consequent rise in mortality, that has given gallbladder surgery a bad name and increased the fear of patients whose gallbladders need surgical attention. Preventive medicine can nowhere be better practiced than in the removal of a gallbladder containing stones, since complications of varying severity will surely occur in a majority of instances.

The occurrence of carcinoma of the gallbladder has frequently been mentioned in connection with gallstones, but its importance as a cause of death has rarely been stressed. Nevertheless, according to Graham (2), it comprises about 10 per cent of all cancer in women. That calculi are of the greatest importance in its etiology is evidenced by the incidence of stone in association with cancer

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of the organ. Judd and Gray (3) found stones present in 64 per cent of their cases and an incidence as high as 100 per cent has been reported (4). Here, then is a definitely precancerous lesion in which 10 per cent of all cancers in women can be prevented by the removal of a gallbladder containing stones. For this reason, if for no other, cholecystectomy should be done.

Common duct stones are found in about 15 per cent of patients with stones in the gallbladder. Contrary to general opinion, a history of jaundice, or of chills and fever, is not necessary for diagnosis, but with the occurrence of both of these the diagnosis is made with greater certainty. The frequency with which duct stones are found in conjunction with gallbladder stones makes careful palpation necessary at every operation, and if the history is suggestive the common duct should be opened for exploration. Operations upon the common duct are hazardous, and the mortality ranges between 10 and 15 per cent. Obviously this complication can be lessened and the mortality lowered by early cholecystectomy with the removal of stones before they enter the ducts.

Acute and chronic pancreatitis are usually the result of gallbladder infection, and frequently follow the impaction of a stone at the ampulla of Vater. An emergency operation may be indicated where symptoms are rapidly progressive, and the mortality in cases of this character is the highest of all types of surgery of the biliary tract. Prolonged drainage of the gallbladder, or the common duct in chronic pancreatitis, with secondary operations to remove stones, is the method of choice, but as in other complications, this can usually be prevented by early removal of the gallbladder.

These and other reasons make it apparent that removal of the gallbladder, chronically infected and containing stones, will prevent complications of a serious and often fatal nature.

CHRONIC CHOLECYSTITIS WITHOUT STONES. Patients of this type should not be subjected to operation unless their symptoms are clear cut and definite, and unless the cholecystogram shows evidence of a gallbladder which functions improperly or not at all. In this, as in other diseases, it must be remembered that relief of symptoms is in proportion to their severity, and in the absence of gallstones, other organs, particularly the stomach, duodenum, and appendix should be carefully investigated before removal of the gallbladder. Graham and Mackey (5) found that only 60 per cent of their patients were improved following cholecystectomy for

stoneless gallbladders. The percentage of those showing improvement or a cure was not increased in the group with a faint or even absent gallbladder shadows in the cholecystogram.

ACUTE CHOLECYSTITIS. It is regarding the treatment of this condition that most differences of opinion arise. Some advocate immediate operation, some delay. Some surgeons advocate cholecystectomy while others prefer drainage of the acutely inflamed gallbladder. Statistics, almost without end, have been produced by both groups to strengthen their contentions.

Some writers, Stone and Owings (6) and Heyd (7), have compared an acutely inflamed gallbladder to acute appendicitis, since the appendix frequently perforates when diseased. This fact is used as a reason for early cholecystectomy in acute cholecystitis. Such reasoning is fallacious and not in keeping with the facts. The physiology and anatomy, and the pathologic conditions which attack the two organs, are entirely different. For example, the gallbladder is in an area where walling-off by omentum and surrounding structures readily takes place, whereas the appendix is usually free in the peritoneal cavity. Moreover, the contents of the gallbladder are usually sterile and inflammation is primarily the result of obstruction, and infection occurs secondarily, whereas the appendix contains the bacteria of the intestine. The gallbladder has the property of distention and absorption which is largely lacking in the appendix. Obstruction of the appendix by a fecalith rapidly produces distention and subsequent interference with the blood supply leading to gangrene and perforation, but in the gallbladder Kreider (8) has shown that the arrangement of the blood vessels usually prevents this complication. The cystic artery and vein lie separate from the cystic duct at the point where obstruction from stone most often occurs and only their branches are closely incorporated in the gallbladder wall. Moreover, there is a rich anastomotic blood supply derived directly from the liver.

Perforation of the gallbladder into the free peritoneal cavity is undoubtedly a rare condition, but the frequency with which it occurs is subject to considerable disagreement. Graham (9) states that he has never seen it except in association with carcinoma, but admits its possibility. On the other hand, Heuer (10) believes that the incidence of gangrene and perforation in acute cholecystitis is 20 per cent, and it is because of this that early operation is advocated. It is likewise claimed that the operative mortality

is greatly lowered by early operation, one surgeon, Clute (11), going so far as to say that in his experience there is no mortality. This is denied by others.

The basis of this whole discussion is the lowering of the mortality, and whether or not this is best accomplished by immediate or delayed operation. Having seen the gallbladder perforate into the free peritoneal cavity on only one occasion, and having seen the acute inflammatory process subside in numerous instances, I advocate delaying operative treatment until the acute symptoms subside. However, this statement is modified by saying that where there is evidence of a rapid spread of infection, or gangrene, empyema, or perforation, the operation is imperative. These sequelae are manifest by a rising temperature, increased pulse rate, and leukocytosis, and by increasing pain and tenderness. The surgeon who takes the view that most such pathologic conditions will subside, and who is willing to carefully watch the progress or regression of the disease, must also realize that he must intervene promptly if the disease is progressing. If improvement takes place and the acute inflammation subsides, I believe it is preferable to wait for several weeks before operation so that the tissues may return as nearly as possible to normal.

If, for any of the reasons just stated, operation is decided upon, the type of procedure is of considerable importance. In some instances, cholecystectomy can be performed with ease, but as a rule cholecystostomy is preferable in gangrene, empyema, or where inflammation has obliterated the anatomic landmarks. Old and debilitated patients, and they are in the majority of those with gallbladder disease, should be treated by drainage of the organ rather than by its removal. In some instances the operation is best done in two stages to prevent the spread of infection.

It must be remembered that gallbladder surgery is not only hazardous but, even in the absence of acute infection, it frequently presents great technical difficulties. Not the least of these is the frequency with which anomalies of the cystic duct, and the hepatic and cystic arteries are encountered. Accessory bile ducts are present in 15 per cent of patients, and variations in the origin and course and position of the blood vessels occur in one-third of the cases operated upon (Flint, 12). Injury to the common or hepatic ducts may produce a fistula or stricture, and is often fatal. Following operation there are fatalities which are classed as "liver-shock and death." These patients rarely regain

consciousness, the temperature and pulse rate rise rapidly, and death usually occurs within two days. While the cause of this condition has not been determined in every instance, it is known to follow ligation of the right hepatic artery and, in my opinion, this is the usual primary cause. It is, therefore, essential that the position and relations of the bile ducts and the vessels be clearly defined before the gallbladder is removed. In the presence of the edema and congestion of acute cholecystitis this can rarely be done, and, for this reason, if for no other, acute inflammatory processes should be allowed to subside, or, if operation is done at this stage, then drainage is preferred to removal.

There are other factors of importance in gallbladder surgery aside from the actual operation. Preoperative ingestion of fluids and glucose to the point of saturation should be done routinely when possible, and should be continued intravenously after the operation. Blood transfusion before and after operation is the best precaution against bleeding in jaundiced patients and should always be done. Quick and others (13) have recently shown that vitamin K, extracted from alfalfa, will reduce the bleeding time of patients with obstructive jaundice. While still in the experimental stage, there is sufficient clinical evidence available to show that this vitamin will prove of great value to those patients. Therefore, for proper preparation, delay in operating is also frequently indicated.

In summary, I wish to emphasize that the gallbladder containing stones should be removed early and thus prevent the serious complications of infection, obstruction, and cancer. I believe that delay should be practiced in the treatment of the acute cholecystitis, if the symptoms are subsiding, but in rapid fulminating attacks immediate operation, usually cholecystostomy, is advisable.

BIBLIOGRAPHY

1. Graham, E. A.: Lowering of the Mortality after Operation on the Biliary tract, *Illinois M. J.*, 60:196, 1931.
2. Graham, E. A.: The Prevention of Carcinoma of the Gallbladder, *Ann. Surg.*, 93:317, 1931.
3. Judd, E. Starr, and Gray, Howard K.: Carcinoma of the Gallbladder and Bile Ducts, *Surg., Gynec., and Obst.*, 55:308, 1932.
4. Janowski, W.: Ueber Veranderbei in der Gallenblase bei Verhauensein von Gallenstein, *Zeigler's Beitr. z. path. Anat.*, 10:449, 1891.
5. Graham, Everts A., and Mackey, W. Arthur: A Consideration of the Stoneless Gallbladder, *J. A. M. A.*, 103:1497, 1934.
6. Stone, Harvey B., and Owings, James C.: The Acute Gallbladder as a Surgical Emergency, *Ann. Surg.*, 98:760, 1933.
7. Heyd, Charles Gordon: Editorial, *Surg., Gynec., and Obst.*, 65:550, 1937.
8. Kreider, Paul Gates: The Anatomy of the Veins of the Gallbladder. Their Relation to an Impacted Stone, *Surg., Gynec., and Obst.*, 57:475, 1933.
9. Graham, Everts A.: The Year Book of General Surgery, 1934, p. 575.
10. Heuer, George J.: The Surgical Treatment of Acute Cholecystitis, *N. Y. State J. Med.*, 36:1643, 1936.

11. Clute, Howard W.: Editorial, Surg., Gynec., and Obst., 66:123, 1938.
12. Flint, E. R., Abnormalities of the Right Hepatic, Cystic, and Gastroduodenal Arteries, and of the Bile Ducts, Brit. J. Surg., 10:509, 1922-23.
13. Quick, A. J., Stanley-Brown, Margaret, and Bancroft, F. W.: A Study of the Coagulation Defect in Hemophilia and in Jaundice, Am. Jour. Med. Sci., 190:501, 1935.

DISCUSSION

Louis Frank, Louisville: Operations on the gallbladder may be very, very simple in being carried out, and I often wonder if it is not for this reason probably that we have had in recent years so many cholecystectomies in so-called simple non-calculous gallbladder disturbances. On the other hand, operations on the gallbladder may be among the most difficult that there are in the entire field of surgery, and I have seen the patience and the skill of some of the best surgeons in this country and abroad put to trial in the removal of this organ.

I think there can be no question as to what should be done in the presence of stones in the gallbladder, even though they be symptom-free. I think every such case is a case for cholecystectomy, though not withstanding, as I said, there may be no symptoms which can be attributed to the presence of calculi in this viscus. The prevention of future cancer of the gallbladder alone would be sufficient reason for removing the gallbladder. So also, as has been so well shown by McClure of the Ford Hospital, all cases of typhoid carriers should be carefully investigated as to their intestinal discharges and proven cases should have the gallbladder removed if we are to do away with them as typhoid carriers.

With reference to non-calculous cholecystitis, we hear a great deal today and see a great many cases of gallbladders removed in which no stones are present. These gallbladders if examined in the laboratory after removal will all show certain minor pathological changes, just as so many of the so-called chronic appendices will show, but this alone is not evidence that there is disturbance or disease in this organ.

Before removal of a gallbladder which does not seem to functionate properly when tested out by the cholecystographic methods, a careful study should be made not only of the stomach and duodenum, but also of the spine, of the colon, especially for carcinoma, and the kidney should also be investigated. There are so many of these patients, as the speaker has said, as shown in the statistics of Graham, who are not relieved after the removal of the gallbladder.

Unlike the appendix, with which it has been compared, the gallbladder does have an important physiological function. It is a part of the liver. The appendix is purely a vestigial re-

mainder and has no function so far as we know. Really the gallbladder does have an important function in the concentration of bile and also in the excretion of certain elements from its wall. This is not true with the appendix, and therefore no comparison can be made, as has been so well pointed out by the speaker.

There are other reasons in connection with the removal of the gallbladder in cases of acute cholecystitis in which stones are present where we have a lighting up of inflammation, why this comparison can not be made.

Again, in cases of simple cholecystitis we must remember that we may have stones too in the duct itself, they may be caught in the Heisterian valve. We may have, as has been pointed out, spasm of the sphincter of Oddi, dyskinesia of the duct, and there are other things that may be present and may be causing symptoms which your simple pathological examination of the gallbladder does not account for in any particular. In many, unfortunately, the symptoms are continued and the patient becomes the bane of the life of the surgeon, is finally referred back to the medical man, and he has to bother with them forever after.

I want to say something about cholecystectomy in cases of acute calculous cholecystitis. I agree fully with the speaker. Each case must be evaluated unto itself. My own opinion, based upon not a very small experience, is that the removal of the gallbladder, a cholecystectomy in cases of acute inflammation due to obstruction, etc., where stones are present, is not always such a simple matter. Just as in appendicitis, here comes the question of the relationship of the time factor, I mean from the onset of the acute symptoms to the time the case comes to operation, which must be considered. After eight, ten, or even five or six days have elapsed, we have quite a different problem to deal with from that which we have to deal with within the first twenty-four or thirty-six hours after the acute onset has begun. Early it may be a very simple matter. Later it may be fraught not only with the utmost difficulties, but as a matter of fact, it is usually attended with tremendously increased difficulties and danger to the patient.

There are so many other procedures which we may do, and as was said to you yesterday by Dr. Lahey, the time and money factors should not enter into considering the life of the patient, so a two-stage operation or a delay in removal of the gallbladder must also be considered and the patient's welfare and the patient's life should be the first things which should engage our attention.

BACKACHE*

DAVID E. JONES, M. D.

Louisville.

In such a symposium as this, backache necessarily plays an important part since it represents, as do headache, cough and hoarseness, and indigestion one of our most common complaints, and I am quite sure that all of you at sometime or other have heard so many complaints of backache that you have wished that there were somewhere that you might turn for the eradication of this symptom in your patients. Backache was long a condition which was accepted as one for which little could be done and for many years was considered by the orthopedist not of sufficient significance to warrant his careful study; however, in recent years, many excellent orthopedic surgeons have turned their attention to this complaint and as a result remarkable advancements have been made, and at the present time this condition is occupying the spotlight to the extent that our orthopedic journals are almost filled with reports of work which has been done along this line.

In considering backache, we find that there are many causes, most outstanding of which is probably back strain, both acute and chronic. Some of the less frequent causes are arthritis, of the atrophic and hypertrophic type, spondylolisthesis, and fibrositis. In this group we must certainly mention trauma to the intervertebral disc, but I believe this should be discussed under back strain. In a similar manner, scoliosis should likewise fall in this category. Fractures, new growths, osteomyelitis, etc. will not be considered in this discussion.

In considering back strain I would like to speak first of the acute back strain which is so frequent among, not only the laboring class, but also among those who are occupied with sedentary work, and suffer back strains from such things as raising windows, playing golf, and doing so-called setting-up exercises which are not suited to their individual cases.

In this type of injury as well as in the usual compensation case, we are dealing with what I prefer to call extension injuries. In other words, these are injuries in which the back is used with the lumbar spine in a position of extension. The occurrence of the injury produces further extension of the lumbar spine, and particularly of the lumbosacral joint, with the facets being carried beyond their normal range of motion producing a subluxation of these joints and an accom-

panying stretching or tearing of the ligaments. Frequently the injury is of sufficient severity to produce marked swelling of the soft tissue with subsequent encroachment on the nerve root, since we find by referring to the anatomy of the spine that the articular facets lie immediately adjacent to the intervertebral foramina. The nerve may suffer actual injury from the subluxation, due to bony encroachment of the foramen when the subluxation occurs since it is progressively narrowed as extension increases. This most frequently occurs in the lumbosacral region and it is usually the fifth lumbar nerve, but frequently the fourth which suffers either from the actual narrowing of the bony foramen and the subsequent soft tissue swelling which gives us the radiation of pain so frequently seen in the body, the posterolateral aspect of the thigh and leg, and sometimes over the dorsum of the foot.

Muscle spasm almost routinely accompanies such an injury and this muscle spasm usually produces and maintains a position of extension of the lumbar spine which is nature's effort at splinting the injured joint. This very protective mechanism frequently aggravates and perpetuates the condition producing the pain.

In considering chronic back strain we are considering very much the same pathology without the acute onset or the history of injury although these may exist; however, the history is usually that of a dull aching pain coming on insidiously and increasing in severity and distribution as time passes. There may be a history of one or more injuries with partial or complete relief between attacks, depending on the ability of the patient's muscular structures to overcome the imbalance. This condition usually arises due to faulty body mechanics with the normal curves of the spine being exaggerated so that over a period of time the ligaments about the articular facets are stretched with the subluxation of these joints occurring gradually rather than suddenly. Accompanying this, of course, is the narrowing of the foramina so that there may be, again, impingement of the nerve roots and this may be due to the actual bony encroachment, or may be due in part to the thickening which occurs in the soft structures about the foramina so that further impingement is produced. However, I believe that in many of these cases there is no actual impingement of the nerve structure, but simply that it is involved in the inflammatory process adjacent to it so that the patient is suffering from a neuralgia rather than from actual

We find that there are four muscle groups pressure on the nerve.

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which enter particularly into the balance between the pelvis and the lumbar spine, namely, the anterior abdominal muscles, the gluteal muscles, the sacrospinalis group, and the hip flexors. We find the abdominal muscles exerting an upward pull on the pelvis anteriorly, and the gluteal muscles pulling downward on the pelvis posteriorly. Thus we have two muscle groups tending to rotate the pelvis anteriorly. The sacrospinalis group acts as an extensor of the lumbar spine and hence increases the lumbosacral angle. The hip flexors make a downward pull on the pelvis anteriorly tending to rock the pelvis posteriorly. Thus we have the abdominal and gluteal groups tending to flatten or flex the lumbar spine and rotate the pelvis anteriorly, while the opposing sacrospinalis and hip flexor groups tend to rock the pelvis posteriorly and extend the lumbar spine. There are other muscle groups which enter into this balance but they are of less significance than those mentioned. It is interesting to note the action of the psoas muscle in that it acts as an extensor of the lumbar spine with the hips extended. With the hips flexed 45 degrees, the psoas then acts as a flexor of the lumbar spine. This has real significance when the problem of correction of lordosis is considered. When we consider how little exercise is given the abdominal muscles and how greatly the gluteal muscles are stretched with the amount of sitting that is done by the average individual, it is seen that these muscles can be readily weakened and even atrophied through disuse. At the same time the sacrospinalis group is constantly at work when we are in the upright position. The hip flexors are a strong group which is further strengthened with walking. Thus we find that it is not difficult for the average individual to develop an imbalance between these groups of muscles with over-powerful sacrospinalis and hip flexor groups. Thus we have the mechanism of lordosis which is so frequently seen. From this I think we can readily see why the more athletic type of individual has a less marked lordosis than the individual who leads a largely sedentary life. In a similar manner we find the effect of fatigue, illness, and any debilitating factor lowering the stamina of the individual so that he does not have the energy to maintain the fully erect posture, and muscle imbalance soon produces its effect which is so difficult to overcome later.

We can readily see that the individual who already has a marked lordosis is more susceptible to the type of injury we have just discussed than the individual who has very little lumbar lordosis.

Following the work of Schmorl, Ayers and

others, Williams has given us a very logical and concise picture of injuries to the intervertebral disc. Williams describes these injuries as both acute and chronic and shows us that sudden pressure on the intervertebral disc with the spine in a faulty position may produce rupture of the nucleus pulposus through the annulus fibrosus. Briefly, he shows that faulty mechanics produce pressure on the posterior aspect of the intervertebral disc, such as is caused by an increased lordosis, so that the nucleus usually ruptures posteriorly. This occurrence is shown by Goldthwait to be due to the thinning of the annulus fibrosus in its posterior portion; however, Williams further shows us that pressure laterally, such as due to a short leg, a list, or a scoliosis, may also contribute to such a rupture.

If we imagine the spine used in either of these positions of increased lordosis or list, we can readily see how an injury to the spine might cause sufficient pressure to produce this condition; however, Williams goes further and states that this condition may be produced through chronic strain of a postural nature, due either to lordosis or list, describing the impingement on the cauda equina with segmental symptoms, and also describes the subluxation of the articular facets with narrowing of the bony foramen together with the soft tissue swelling and thickening that may follow.

In considering the factor of spondylolisthesis in backache, let us first define the condition as the forward displacement of the body of the vertebra in relation to its adjacent vertebra due to a defect in the arch of the vertebra. The arch being deficient, the body is held in place only by ligaments, and it is my feeling, that, with an increasing lordosis causing the most frequent cases at the level of the fifth lumbar vertebra, more and more pressure is put on the ligaments until the body actually slides anteriorly. In my experience this condition has been largely a problem of back strain with the symptoms being identical with the condition of back strain.

Arthritis, as we all know, frequently involves the joints of the spine, and we are inclined to think of the bony spurs which we see in the hypertrophic type and the erosion of the cartilage which is seen in the atrophic type as being the chief difficulty in the condition. It is my feeling that very little in the way of symptoms is produced by these bony spurs which we see protruding from the superior and inferior margins of the vertebra in the hypertrophic type, and the narrowing of the intervertebral space in the atrophic type. Rather, the involvement of

the articular facets with the thinning of the joint spaces at this point and with the thickening of the ligaments and the subluxation which takes place, is more likely the cause of the pain in arthritis.

However, in considering the cause of pain in arthritis and fibrositis, which we define as a low grade inflammatory process of the fibrous tissues of the body, we must look farther into the condition than just at the joints. There is a marked derangement of physiology in these two conditions which involve many physiologic factors. These must be thoroughly considered and adequately corrected before the condition subsides, even though the joint be adequately treated. Fibrositis differs from arthritis in that there is very little joint involvement, either in the nature of swelling or destruction later on, although there is the same marked degree of pain and stiffness. The pain is not as well localized and does not have as definite radiation as do the pains of back strain and spondylolisthesis.

Of course, another cause of backache may be that of scoliosis, but we find that usually the scoliotic changes occur so gradually and the individual is so limited in his activity that the scoliotic back is usually not a painful one; however, it is a back that is very susceptible to injury and we may have pain at any time during the formation of a scoliosis. This pain occurs as back strain or impingement of nerves.

Neuritis and neuralgia must be left to the neural surgeon and the neurologist, since neuritis is purely a nerve condition involving inflammation of the nerve itself. Of course many so-called neuralgias, particularly involving the sciatic pathway, are referred pains from the low back.

In considering the treatment of backache it seems obvious from the foregoing discussion that body mechanics play a tremendous part in these conditions; certainly, it contributes largely to the greater percentage of back injuries and is all important in the chronic back strain. I believe that I have further shown that spondylolisthesis depends not only on the congenital difficulty in the vertebra but on the effect of the mechanics of the body as well. Certainly, Williams' work shows the importance of body mechanics in relation to injuries of the intervertebral disc. In considering arthritis and fibrositis it has long been my contention that the joints involved in these processes are those which carry the greatest strain. It has also been my observation that until the strain has been removed from these joints little can be done in overcoming the process.

Three methods of attack are open to us in

the correction of these conditions. Two are conservative and one is radical. We are too frequently seeing cases of persistent backache which have been operated for the purpose of fusion of one or more joints of the lumbar spine or of the sacro-iliac joint. I believe that if we kept in mind in these cases the fact that the fusion of one joint transfers the strain to the next higher joint we would be less inclined to fusion of these backs until all possible conservative treatment had failed.

In considering conservative treatment, the foregoing discussion of muscular pull as related to the lumbar spine and pelvis gives us a good understanding of what must be done to correct the faulty mechanics. In my experience corrective exercises for the strengthening of the abdominal and gluteal muscles has been productive of very satisfactory results. It is difficult of course to convince the patient that a voluntary change in posture is of sufficient importance for him to work at it earnestly; however, he can be started on a mild group of exercises which can be rapidly worked into a more strenuous group so that his muscles are toned up to the extent that without conscious effort, posturally, on his part, his kypholordosis is reduced and his weight bearing line altered. My method of treatment has been the use of abdominal and gluteal contractions with the patient recumbent. When he has gained sufficient control of these muscles they are used in the standing position and there are many variations of these exercises, together with others that make it possible to overcome the mechanical difficulties more rapidly; however, Williams tells us that he uses the exercise of lifting the head and the shoulders from the table with the abdominal muscles for their exercise, the lifting of the hips from the table for exercise of the gluteals, and the active stretching of the sacrospinalis group with the patient pulling the knees into the axilla so that the pelvis is markedly rotated. He also describes an exercise for the stretching of the hip flexors which I feel must be so closely supervised that it is not practical for the average patient. These exercises which he describes are quite strenuous and must be supervised carefully at first to prevent the action of the sacrospinalis group and the ilio psoas muscle. Due to the action of the psoas muscle previously described, the hips must be flexed to 45 degrees before using the exercise of lifting the head and shoulders from the table with the arms crossed over the chest.

Another method of approach in the form of conservative treatment is the use of a back brace or a plaster jacket. The Goldthwait type of spring back brace has given

satisfactory results; however, Williams has recently devised a new type of brace which gives us very adequate correction of the lordosis and likewise facilitates the correction of the kyphosis. While the plaster jacket has long been used for immobilization of the lumbar spine, Williams gives us a unique method which is quite simple. Realizing that the object in treating low back pain is to overcome the lordosis, he has his patient rest his elbows on a table of sufficient height that it reaches approximately the lower costal border. This produces flexion of the hips and lumbar spine and in this position the jacket is applied from the third sacral segment to the angle of the scapula. When the patient assumes the erect position the sacrum is forced downward so that there is an anterior rotation of the pelvis with correction of the lordosis. It is imperative in my estimation that no appliances, either in the way of braces or casts, be applied without the use of exercises to tone up the muscles in the correct position when the condition has subsided. Otherwise, the supporting muscles weaken from disuse with subsequent increase in symptoms.

Williams' use of the plaster jacket, and positions for the patient in bed with the back flat and the hips and knees flexed, is in a large sense a modification of Goldthwait's corrective positions in which he has the patient lie on the back with pillows under the knees to overcome the lordosis, and with the patient lying prone with pillows under the abdomen extended to the bend of the hips which likewise overcomes the lordosis. It is of great significance to me that Brown tells us, and we have experienced ourselves, the fact that such positions will relieve back pain when reasonable doses of morphine will not.

The use of rest, corrective positions and exercises, plaster jackets, back braces, etc. comprise the conservative methods of treatment and it is my feeling that we should give each and every one of these cases adequate conservative treatment before the more radical procedures are considered.

Dr. Prince has recently shown us how little has been accomplished with fusion of the low spine. He states that of six cases of sacroiliac fusion in which results are classed as fair, one case is not yet settled, and in the remaining five the average premanent disability was 73 per cent. In eight cases of lumbosacral fusion in which the results were called fair, there was an average permanent partial disability of 51 per cent. In those cases of lumbosacral and sacro-iliac fusion in which the results are classed as poor the permanent disability mounted to 84 per cent. This is an indictment against the surgical

methods employed, and if we are to maintain our professional standing these results must certainly be improved. Let me hasten to state that I do not think the entire burden falls upon the orthopedic surgeon, but largely upon the physician who first sees the patient with a back injury. Too frequently we find the patient has had his back taped and advised to return to work. If not this, then he is advised to remain off duty for a time, but during this period we have not even the fixation of a plaster jacket nor the advantage of bed rest in the proper position as the patient is allowed to be up and about as he sees fit. Would it not be much simpler and much more economical to place these patients in bed for a period of from a few days to two weeks, with an equal length of time for further healing of the ligamentous injuries, and some training in the proper use of the back and its protection, than to try to rush the patient back to work with the thought that his injury is not serious. We do not treat sprained ankles with such levity, and certainly ligamentous injuries of the back likewise should not be so treated.

After sufficient conservative treatment, and I mean by this several months if necessary, fails to produce relief of symptoms then I feel that the advice of Barr should be followed, namely, that a spinal puncture should be done and if necessary lipiodol injection of the spinal canal should be done in an effort to determine whether a rupture of the nucleus pulposus has occurred, and if so if it has produced some pressure on the nerve pathway or the cauda equina. When such a condition exists then I feel that the procedure described by Barr, namely, the removal of the obstruction and fusion of the joint should be done; however, Williams feels that where the symptoms are segmental in character not only should a fusion be done, but a facetectomy as well since this relieves any impingement of the nerve.

Many radical procedures have been advised for relief of low back pain:

1. Lumbrosacral fusion as has been described above has been advocated by Hibbs, and Albee.
2. Sacro-iliac fusion has been advised by Smith-Peterson and Campbell.
3. Facetectomy, as described by Putti, Ghormley and Williams.
4. Laminectomy with excision of the nucleus, as advised by Barr and Mixter, and Spurling.
5. Section of the ilio-tibial band, as advised by Ober.
6. Section of the piriformis muscle, as described by Freiberg.

7. Sub-periosteal stripping of the gluteous maximus muscle as advised by Heyman.

By careful analysis of each case that comes to surgery, I believe it will be found that each of these methods has its good points; I do not believe that any one of these procedures may be used for any or all back cases. Let us bear in mind that before any fusion operation of the spine should be done previous steps should be taken to correct the faulty position of the spine and pelvis; otherwise, we may find that we have only permanently fixed the condition which we are trying to relieve.

It seems reasonable to assume that if adequate conservative treatment be given these patients there will be very few of them with whom we need resort to radical methods.

BIBLIOGRAPHY

1. Goldthwait, J. E., Brown, Lloyd T., Swaim, L. T., Kuhns, J. G.: *Body Mechanics*, Lippincott, 1934.
2. Barr, Joseph S.: "Sciatica" caused by Intervertebral Disc Lesions, *J. Bone & Joint Surgery*, Vol. XIX, No. 2, April 1937.
3. Williams, Paul C.: Lesions of the Lumbosacral Spine, *J. Bone & Joint Surgery*, Vol. XIX, No. 2, April 1937.
4. Compere, Edw. L.: The Operative Treatment of Low Back Pain, *J. Bone & Joint Surgery*, Vol. XIX, 749, 1937.
5. Brown, Lloyd T.: The Mechanics of the Lumbosacral and Sacro-Iliac Joints, *J. Bone and Joint Surgery*, Vol. XIX, 770, 1937.
6. Prince, Howard L.: The Compensation Aspects of Low Back Conditions, *J. Bone & Joint Surgery*, Vol. XIX, 805 1937.
7. Goldthwait, J. E.: Low-Back Lesions, *J. Bone & Joint Surgery*, Vol. XIX, 810, 1937.
8. Kendrick, J. I.: The Treatment of Sciatica, *Medical Clinics of North America*, Vol. XXII, 527 1938.
9. Ober, F. R.: Relation of the Fascia Lata to Conditions in the Lower Part of the Back, *J. American Medical Association*, August 21, 1937, Vol. 109, p.p. 554-556.
10. Barr, J. S., Hampton, A. O., Mixer, W. J.: Pain in the Back and "Sciatica," Oct. 16, 1937, Vol. 109, p.p. 1265-1270.
11. Sweet, Clifford: The Teaching of Body Mechanics in Pediatric Practice, *J. American Medical Association*, Vol. 110, No. 6, February 5, 1938.
12. Ayers, Charles E.: The New England Journal of Medicine, Vol. 213, No. 15, October 10, 1935.
13. Ober, Frank R.: Back Strain and Sciatica, *J. American Medical Association*, Vol. 104, No. 18, May 4, 1935.
14. Heyman, Clarence H.: Thoughts on the Relief of Sciatic Pain, *J. Bone & Joint Surgery*, Vol. XVI, 849, 1934.
15. Brown, Lloyd T.: The Conservative Treatment of Backache, Vol. XIV, 157 1932.

DISCUSSION

W. Barnett Owen, Louisville: The first thing before consideration of treatment of any condition, particularly in a case with an obscure symptom like backache, is the taking of a very thorough history. Of course, Dr. Jones does this and I am not suggesting something he does not do. Next, it is very important that we strip the patient and make a very careful physical examination. Many times this is not done.

The causes of backache are legion, as Dr. Jones has enumerated. We all encounter difficulties in this field. I feel that every case of backache after it has been thoroughly studied should be treated conservatively for at least a reasonable period of time. Frequently conservative treatment is all that is required.

Dr. Jones has gone into detail about the great advantage of the correction of body mechanics and posture, rest, heat, support and gradual physical therapy, either associated with or directly following this treatment. That, of course, will relieve a great many cases. On the other hand, we all have a certain number of industrial cases to handle. Backache is one of the sources of great embarrassment and difficulty, financial and otherwise, to insurance companies, industrial plants, and to the doctors themselves. It puts a different light on the patient's attitude, especially when he has been injured while occupying some position for which he may receive compensation.

I have made mistakes in some cases in believing that many of these cases were not quite fair with their symptoms. I think this does occur sometimes but often it is our fault in that we have not studied the case thoroughly enough to make a true diagnosis. I have had cases which have been settled with the company and at a later date have had some radical operation and been relieved. When there is a question of a patient's being entirely fair, if you will suggest some extensive operation that might entirely relieve him as against the alternative of continuing as is, usually if the patient will agree to the operation to get relief I think it is a good sign that the true picture has been gained.

There are many more cases in which intra-spinal pathology has occurred than I heretofore thought possible. I am quite sure that all of us have overlooked a number of such cases in the past. They have recurrent attacks of pain in the back, referred down one lower extremity which is exaggerated by straining, coughing or sneezing and become no better fast.

Ordinary x-ray films, anterior-posterior and lateral views, are necessary to rule out bone injury and disease but are not sufficient to make a definite diagnosis of an intra-spinal pressure lesion. An injection of a small amount of lipiodol, probably 2cc's, is the best course of diagnosis which the neurological surgeons have at their command at the present time. A number of men, of course, have warned against the use of this method of diagnosis and I think it should not be done promiscuously but only as a last resort in properly selected cases by one thoroughly familiar with the procedure. Here I wish to strongly emphasize the importance of x-ray interpretation which should be done by a man thoroughly competent to make such readings. If, on a number of plates, the same abnormalities in the spine are visualized and if this corresponds to the clinical findings from a physical examination of the patient, being on the same side as the radiating pain, it is good assurance that we

have obtained the correct diagnosis and located the trouble.

It is remarkable the prompt relief obtained after a positive and correct diagnosis of intra-spinal pathology has been made when the offending nucleus pulposus or hypertrophied ligamentum flavum or the abnormal pressure from any source has been removed. Usually, the next day the same pain which was previously complained of has disappeared and remains absent thereafter. There are some cases which have recurrences.

Walter Hume, Louisville: In a strictly orthopedic discussion I would have a very small place. Dr. Jones in his excellent paper, however, admitted that there were other sides than the orthopedic to this problem and invited discussion. The subject is so broad, in the first place, that it might seem unwise to broaden it any further. However, I enter this discussion for just one main purpose. It seems to me that there are quite a few rather embarrassing mistakes or failures in the matter of attempts to relieve back pain by pelvic or abdominal operations. Perhaps the orthopedists and the gynecologists or general surgeons and the x-ray men by careful consultations could eliminate for each of our groups some of these embarrassments.

I like to and do think of backache, back pains, in several groups, with the idea of tracing down the causes.

First, there is a great toxic group due to acute or chronic infectious processes. There is a great group, of course, due to direct injuries. There is another group that may be due to abdominal or gynecological conditions.

It is interesting to study referred pain. It is not unusual at all for a liver or gallbladder condition to produce back pain at the angle of the scapula or sometimes in the dorsal region. It is very common for malignant or other conditions of the stomach or of the pancreas to produce boring back pain, too, Mesenteric traction in abdominal distentions, kidney pains frequently, and coming on down in the lower abdomen and pelvis Crossen arranged some twenty conditions, all of which he says may cause back pain. That goes to show how complicated differential diagnosis in the case of back pain may be.

As I said at the outset, it has been my experience that many pelvic operations done perhaps not primarily to relieve back pain but with that as an incidental purpose fail. I have been amazed at times at the tremendous pelvic or abdominal pathology with no backache complained of at all. So I suggest in minor pelvic pathology do not promise your patient too much.

Consult with the orthopedist and the x-ray man; perhaps try some treatment of a simple sort in the way of test treatments to see if you can get relief; try position, and all that, before any radical operation is done on the pelvic organs with even the secondary purpose of relieving pain. If you have actual muscle spasm, if you have pressure point pain in the back, if you have radiation of pain, frank radiation down the limbs, it is more than likely that it will point to neurological or orthopedic cause in the back.

W. J. Martin, Louisville: I did not know until a few minutes ago that I was to be asked to discuss this paper, and I am sorry to say that I missed part of it, for which I apologize to the essayist.

A great many people with proctologic conditions complain of backache. I am at a loss to explain why people with proctologic conditions have backache. However, if you will peruse the literature of the advertising proctologic clinics, you will find that they make the statement that proctologic conditions such as hemorrhoids, fissures, and fistulae will cause everything from ingrown toenails to loss of memory, including backache.

It seems to me that there are only two practical theories on which proctologic conditions as a causative factor in backache might be based. One is the theory of infection. On account of the nearness of the parts to the low back, it might be possible that an ascending infection would cause a myositis, synovitis, or some other type of infection. On the other hand, it might be possible that the position which a person suffering with proctologic conditions might assume in attempting to become comfortable, would throw an undue strain on the musculature and ligamentous structure which might cause some discomfort. To my mind these are only theories. It is true, however, that some people are relieved of backache following proctologic operations. This is probably due, however, more to the rest in bed following operation than it is to anything that the proctologic surgeon might have done to relieve a condition of this kind. Conversely, it is sometimes true that during the post-operative period many people who have never complained of backache before, complain of low backache at this time. This would lead one to believe that probably it is a result of the strain thrown on the back in attempting to assume a comfortable position on sitting.

I think that anybody who operates and promises the patient that he is going to be relieved of his backache as a result of an anal operation, without seeking further the cause of the

backache, would be very unwise indeed.

David E. Jones (in closing): I believe from the literature and from the case reports that we see that all segmental symptoms of backache, those backaches which produce true segmental symptoms, should be explored operatively, even though the x-rays may be negative.

I appreciate Dr. Hume's discussion, because Dr. Hume has gone into an angle of this paper which I was unable to take up. I believe that he assumes that backache is a very complicated problem, with, as he says, many, many causes. Certainly we could talk at great length about backache and probably tell you in a few minutes the few things that we really know about backache.

He has mentioned the toxic symptoms with which we are all familiar. Certainly a focus of infection must always be sought in this type of pain. When that is not present we must look elsewhere. He has mentioned the abdominal source, the mesenteric traction, a thing frequently referred to as visceroptosis.

The metabolic symptoms, I believe Dr. Hume mentioned or certainly implied, are of the utmost importance in backache. It has recently been my experience to see three patients whom I thought had back pains and treated accordingly. It was not until the metabolic condition was entirely cleared that these patients got relief, and I since felt that it was irrespective of the mechanical correction that was made. So we do have definite metabolic backaches; I mean by that any of the glandular disturbances that produce a fall in the metabolism may be the cause underlying backache. Let's not forget that, because it certainly has come home to me very forcibly and has given me a method of treatment of backache that I had not seen before.

Diethylene Glycol Poisoning.—Lynch describes four cases resulting in death from the ingestion of the new "elixir" preparation of sulfanilamide in diethylene glycol solvent. It appears that the lethal constituent was diethylene glycol, apparently used by the manufacturer simply as a solvent. Study of the necropsy from these cases reveals an interesting and somewhat unique picture, similar to that produced by certain other poisons and yet apparently distinct. They may be summed up as showing in common a characteristic acute necrosis of the secretory tubules of the kidney and an equally characteristic central lobular necrosis of the liver, both conditions apparently based on direct epithelial damage. Two cases showed infarction of the renal cortex, in one complete in both organs, like embolic infarction and apparently resulting from vascular closure in the areas affected.

HABIT TRAINING AND HABIT DISORDERS*

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Habit training is the most important job of Parents for the first five years of their children's lives. It is during this period that they form those elementary habits of eating and sleeping and of bowel and bladder control. Also they develop very definite ideas about obedience to those in authority over them, and to the give and take of life with their playmates. If parents can bring their children to their fifth birthday in complete control of the above habits, and in a state of obedience to them and with a generous yet selfrespecting attitude toward their playmates, they have indeed accomplished much. Unfortunately many parents in their zeal for perfection have also developed in their children antagonistic and rebellious attitudes which color their relations with their fellowmen for the rest of their lives.

Regulation of the bowel function is one of the first habits we attempt to establish. The technique is simple. When the baby is 3 or 4 months old it is set upon a small chamber in its mother's lap, and its abdomen is massaged until it has a stool. It is necessary to stage the performance at the time when the baby normally has its stool, or if there is no such time at least 5 or 6 hours after the last stool. The baby soon develops a conditioned reflex between sitting on the chamber, and abdominal massage and defecation, and goes into action as soon as placed in position. Suppositories should never be used as they will more than likely develop the suppository habit.

Encopresis or voluntarily passing of feces into the clothing is a condition sometimes found in intelligent children well past the age when control is expected. It is usually a form of rebellious or negative reaction against the mother or nurse. Such children will control themselves perfectly if put in a hospital and not allowed to see any one they know. Treatment is the same as treatment of negativism of any kind, i. e. adjustment of the clashing personalities or separation of them.

Psychogenic constipation is rather common. Here the child fears or dislikes to sit on the toilet and defecate. Treatment consists of local examination to rule out fissures or other painful conditions and trying to overcome the fear of defecation, or dislike of the toilet seat.

*Read before the Jefferson County Medical Society

Bladder control is useless to attempt before the infant can walk by himself. By 14-16 months most infants can get about very well. The technique is to put him on his nursery chair every waking hour. Praise success, but do not condemn failure too severely as he may develop a rebellious attitude, and urinate on the floor for spite. Training pants in place of diapers are a great help in making mishaps more conspicuous.

Bed wetting is not considered unusual until after 3 years. The cause of enuresis is unknown. Such things as tonsils and adenoids, phimosis, acid urine and alkaline urine probably have nothing to do with it. The patient should always be examined, of course, to rule out such conditions as diabetes mellitus, diabetes insipidus, piuria or urinary obstruction with overflow. The treatment of enuresis is medical and mental. Medical treatment consists of restricting fluids to a minimum for 3 hours before bed time, restricting excitement for 3 hours before bedtime, eating a simple supper and putting the child on the toilet 2 or 3 hours after he goes to bed. The mental treatment of enuresis consists of encouraging a child to want to stop and of making him believe he can stop. One effective way of encouraging a child is to put a gold star on a calendar on the days he has a dry bed. Wet beds had best be ignored except to express disappointment, and to have the child assist in cleaning them. Punishment usually makes enuresis worse, but there is one group of cases that it benefits, and that is the children who wet their beds because they are too lazy to get up, or who do it to attract attention to themselves.

Good sleeping habits are best developed by putting babies to bed in quiet rooms, and turning out the lights and leaving them alone. When we find babies who cry at night it is generally because either they were never trained, or their good habits were broken up by illness. If a well trained child contracts rhinitis and can not breathe through its nose, it will wake up and cry. Several nights of this will destroy the sleeping habit no matter how well fixed. After the rhinitis is over it will be necessary to develop the habit all over again by allowing the baby to cry itself to sleep. It is only fair in such cases to assist nature with a sedative at bedtime for several nights. Other things besides rhinitis that destroy sleeping habits are overstimulation from romping before supper, indigestion, enlarged adenoids. All infants should be trained to sleep in sleeping bags. Otherwise it will be impossible to keep them covered.

Obedience or discipline is the habit that

most parents have difficulty with. There are two divergent points of view on the subject of training children to obedience. One is that they should be regimented in every way and strict rules of eating, sleeping, play, school etc. should be laid down and followed. Children who live in such environments are likely to revolt against the system and become incorrigible rebels or to submit to it and grow up without sufficient initiative to lead successful lives. The other point of view is that children should be allowed to do pretty much as they please, that they should not be made to obey. Such children have plenty of initiative, but they have so little respect for rules and so little consideration of others, or sense of responsibility that they make undesirable people.

Perhaps we can clarify our thinking about child discipline by considering the objectives to be striven for. There are three outstanding objectives that we all agree upon:

1. Initiative.
2. Give and take.
3. Ambition to do things well.

Initiative is certainly not developed by regimentation. A child must have a large amount of freedom of will and action to develop initiative. The willingness to give as well as take is an acquired, and not a natural characteristic, and will not be developed by letting a child grow up unsupervised. The ambition to do things well is inspired by association with someone who excels in his work. To carry ambition to accomplishment requires a great deal of supervision. So we see that two of our three objectives require considerable supervision and regimentation, and I do not think Initiative will be killed by a good deal of these skillfully applied.

One of the chief objects of discipline is to make the child believe the thing he is told to do is the best thing to do; i. e. he is made to want to do the right thing. This is where parents so often fail. Then apply discipline like an unyielding yoke, and make no effort to show the child why it is the best procedure to follow. Another mistake parents make is to let a child do a thing one day, and not do it the next. This confuses him, and makes him rebel against parental authority. A good way to get cooperation and obedience out of a child is to find out what he wants to do, and if his desire is proper, not only to allow him to carry it out, but to help him carry it out. If his desire is not advisable, explain to him why and divert his mind to other channels.

Eating is a habit which has received more attention in the pediatric world than it deserves. Anorexia may be due to toxic absorp-

tion from tonsils and adenoids, carious teeth, intestinal parasites, tuberculosis, etc. It may be due to fatigue and is frequently found in overstimulated children. It may be due to avitaminosis. By far the commonest cause of anorexia is rebellion against parental demands that children eat more than they want and foods they do not like. Dr. Clara Davis has shown that infants of one year have definite choices of foods, and are capable of deciding correctly how much they need. Forcing of food past the child's appetite results in rebellion, and makes meals a scene of battle and dissension instead of relaxation and happiness. Children up to 5 years of age are distracted by conversation, and so eat better away from the family table. Children past the age of 1 year should have their own spoons, and be encouraged to use them. No child should be forced to remain at the table longer than twenty-five minutes. No coaxing or coercion should be resorted to to make him eat.

There is a group of habits which has for its object the production of pleasurable sensations in various parts of the body. They are called autoerotic habits. For many decades at least they have had the marked disfavor of the human race. They are—masturbation, thumb sucking, tongue sucking, ear pulling, umbilicus rubbing, head rolling. Take masturbation as example. There is a wide spread belief that masturbation leads to insanity. Nothing could be farther from the truth. It does produce marked feelings of inferiority and shame, but does not lead to mental breakdown. All sorts of mechanical devices have been made to inhibit the act, and innumerable ointments have been formulated with the purpose of destroying sensation in the erogenous zones. The emotions of the parents are roused to the point where severe punishments are threatened and carried out. All of this fixes the habit more firmly in the consciousness of the child, and usually succeeds only in driving the acts into secrecy. The best way to treat masturbation is to first reassure the parents about the harm it may do, and impress them with the importance of remaining calm. Then explain to the child that it is one of the taboos of civilization such as picking the nose or belching gas or passing flatus, and that he ought to discontinue the practice as he would that of any breach of manners. This puts it on a common sense unemotional plane where co-operation can be expected. Also the child's daily routine should be gone over to see that he has sufficient healthy exercise, and is tired by bed time.

Thumb sucking has been condemned be-

cause of the belief that it deforms the dental arch, and carries bacteria into the child's mouth. However, studies have been reported which show that unless thumb sucking is carried past the 6th year, it has no permanent effect on the dental arch; also that children who suck their fingers are no more liable to gastro-intestinal or respiratory upsets or stomatitis than children who do not. Thumb sucking usually ceases spontaneously when children reach 3-4 years. The most persistent cases are the ones where most strenuous efforts have been made to stop it.

In considering the subject of habit training we must remember that infants, and children are human beings, and as such have their own individual likes and dislikes. If in our efforts to train them in the most approved manners, we run counter to those likes and dislikes, we some times find ourselves against a stone wall of resistance. When we encounter such resistance it is better not to try to batter it down, but to go around it or to wait a while and maybe the wall will disappear.

DISCUSSION

S. S. Ackerly: The average child guidance or mental hygiene clinic sees children later than the pediatrician. I would suspect that the age cure reaches its height in our clinic at the onset of adolescence when the more serious problems are brought to our attention. One can easily see from the histories of these children that they did show early behavior and personality deviations which went undetected.

Dr. Bruce said a very wise thing when he stated, "do not hasten to batter down the wall a child raises, but wait and the wall will fade and disappear." But when the wall does not disappear, after a judicious period of non-interference, such problems should be given careful study, parental management overhauled, and a thoughtful plan of procedure worked out.

Dr. Bruce's interesting discussion of behavior problems in young children strikes home I am sure to all parents. Once a parent begins studying the reactions of a child with the same careful scrutiny that a child studies the parents, he begins to learn something. But the way to go about this is difficult for the average parent to figure out and here is where the pediatrician should be consulted.

As Dr. Bruce says, the first five years of a child's life are perhaps the most important in developing patterns of future behavior. The pediatrician is the one who sees the child through these early years and therefore, has a great opportunity for educational guidance with parents.

J. W. Bruce (in closing) I don't believe I have anything to add except that I do be-

lieve that the subject of mental hygiene is coming to be recognized more and more as one of the most important branches of pediatrics and internal medicine. I think the old family physician knew more about mental hygiene than we do. His ability to size up a situation, to get at the bottom of difficulties, made him a person that the family just could not get along without.

IS DELAY JUSTIFIABLE IN THE SURGERY OF ACUTE CHOLECYSTITIS?*

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and

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Only a few years have passed since the heated controversy over the relative merits of cholecystostomy and cholecystectomy was being waged and the final decision was awarded the proponents who favored removal of the gallbladder in most cases, over those who insisted on its surgical drainage.

At the present our attention is again engaged with a problem involving the surgical treatment of gallbladder disease. This time we are concerned with the surgical management of acute cholecystitis; primarily in weighing the merits of early or immediate operation, against the eventualities of delayed attack or a waiting attitude.

We hope to present the current opinions and the methods and results of management of 28 cases of acute cholecystitis which occurred in our series of 250 unselected cases of surgical gallbladder disease.

The following classification based on the time of surgical intervention is being generally accepted. The immediate or emergency group include the cases which come to surgery within the first 48 hours. When the time extends beyond this period to 5 or 7 days treatment is said to be early. Should weeks or months intervene after an acute phase operation is considered delayed.

Among representative surgeons recommending immediate operation are included:

A. J. Walton who as early as 1923 felt that an acute gallbladder required the same emergency treatment as an acute appendix in order to avoid perforation, gangrene, etc.

Graham urges prompt operation. In 198 consecutive cases, 20 were operated upon within 48 hours of the onset with a 5 per cent mortality; the remainder were operated upon after 48 hours with a mortality rate of 6.2 per cent.

Stone and Owing believe that the same

urgency exists as in acute appendix or perforated ulcer. Finney, Clute, Heuer, Lahey and Walters believe in immediate operation.

Cave, Branch, Zollinger and a number of others feel that the added mortality in immediate surgery is a greater risk than the incidence of perforation, gangrene, peritonitis, liver abscess, subphrenic abscess and the other sequelae attributed to delayed operation.

The goal to be attained by both groups is essentially the same, namely the type of management which will offer the best results in low mortality, morbidity, relief of symptoms and protection from complications and probable subsequent operations.

It seems to us the whole problem is hinged on the opinion one holds as regards the role of infection and its part in perforation, gangrene, peritonitis, etc. There is much evidence that bacterial invasion is late and secondary to obstruction which phenomenon usually results from a stone in the cystic duct. Following this comes swelling, pressure on the veins, the lymphatics and in some cases branches of the cystic artery with occlusion and infarction of the gall bladder wall. With this set-up the field is prepared for bacterial invasion and the sequelae that follow infection.

Studies of the bacteriology of the gallbladder by Wilkie, Denton, Feinblatt, and Andrews agree that bacterial infection plays a minor and late role. Wilkie found that human bile in the majority of cases of chronic cholecystitis was sterile and cultures from the walls were sterile. When a saline suspension of streptococci was injected in the lumen of the rabbit's gallbladder there were no changes, while intramural injections produced chronic cholecystitis or empyema only when the cystic duct was ligated.

Aronsohn and Andrew in an effort to determine the role of infection in gallbladder lesions conducted numerous experiments. By the aid of a ureteral catheter passed through an opening in the common duct and thence into the gallbladder via the cystic duct they were able to introduce in an atraumatic manner bacteria into the gallbladder. These studies showed that there was little tendency for acute bacterial infection of the gallbladder wall to result from any of the contents of the organ. Bacteria, although present in the bile in overwhelming numbers did not cause any change in the wall, unless they were of unusual virulence, unless the cystic duct had been ligated, or the wall traumatized. Elaborate chemical studies of the bile and allergic reactions following sensitization to specific protein defied logical interpretation as re-

*Read before the Bourbon County Medical Society on August 18, 1938.

garded this problem. From their studies, they had this to say about the theory of infection in gallbladder disease. First, that pathologically few signs of bacterial infection were noted. Mononuclear cells were prevalent but pus cells were rare, even in the so-called empyema cases. Bacteria were seldom found in stained sections of the gallbladder and bile was sterile in a high percentage of the diseased gallbladders. Finally, there was the clinical observation that sepsis was a rare complication of cholecystitis and that the gallbladder cases infrequently were the source of pyemia. In Kunath's clinical series of 90 cases of acute cholecystitis diagnosed histologically, cultures taken in 40 per cent showed no growth.

These experimental and clinical studies lend support to the opinion that obstruction to the cystic duct is the primary development in acute gallbladder disease and that infection when present is secondarily implanted in the devitalized viscus. Wesson and Montgomery in reporting 76 operative cases of acute cholecystitis found stones in 72 or approximately 95 per cent. Kunath found 92 per cent in his series and we encountered stones in 67.9 per cent of our 28 cases.

Those who advocated immediate or emergency surgery, I believe, have in mind the obstructive nature of the lesion at the onset and wish to relieve the process before infection has been invited with its harmful influence and subsequent perforation, gangrene, localized abscess, peritonitis, etc. Perforation is no myth and unquestionably accounts for the increased morbidity and mortality. Its incidence is consistently high in the various series, Kunath reports 22 per cent, Glenn 15 per cent, Heuer 21 per cent, Zininger 20.5 per cent, Morris Smith 22.4 per cent, Wesson and Montgomery 21 per cent, Branch and Zollinger 20.3 per cent.

This fact must be kept clearly in mind when deciding upon the course of treatment of acute cholecystitis since the factor of perforation probably influences more than any other the mortality in these cases. The mortality ranges in the series of Kunath was 7.3 per cent; of Glenn 5.9 per cent, of Wesson and Montgomery 3.9 per cent, Graham of Toronto 16 per cent in immediate cases, in early cases 4.8 per cent; Heyd 14.7 per cent, Branch and Zollinger 14.4 per cent, Smith 9.3 per cent, our series 10.7 per cent. This mortality is in striking contrast with the average mortality of 3 to 4 per cent in uncomplicated chronic gallbladder lesion operated upon by most well organized surgical groups. It was 4.03 per cent in our series of 222 cases.

Those who prefer to wait for the process to subside claim that the acute stage generally takes care of itself and that there is greater danger to operation during this period. That could hardly be denied with an average operative mortality of 3 to 4 per cent in chronic gallbladder disease as against 5 to 16 per cent in acute gallbladder conditions but there are no criteria whereby we can know the cases that are going to subside and can be operated upon during the chronic phase with its lower risk. Pain, tenderness, rigidity, a mass, jaundice, the leucocyte count are not so consistent that one can with any degree of certainty tell in advance which cases will subside on conservative treatment and which will not, however, an increase in pain and tenderness, a rise in temperature and the leucocyte count should favor operation.

Emphasis is again placed on obstruction when Abell says, "it is his belief and practice to place the acute obstructive type of cholecystitis in the emergency class, since 95 per cent of all cases of gangrene and perforation occur in this group. The infectious type of cholecystitis without obstruction does not carry with it much threat of these complications; both empyema and hydrops are chronic obstructive lesions and are relatively free from such dangers and hence offer some basis for the arguments of those who would place them in elective surgery. With coincident blockage of the cystic duct and the presence of active infection in the gallbladder, delay only too often invites the appearance of complications which not only enhance the danger to the patient but increase the technical difficulty of a subsequent operation. Gangrene, perforation into the liver with the formation of a hepatic abscess, perforation through the free surface with resultant diffuse peritonitis, or if walled off by adjacent viscera, the production of a subhepatic abscess, cholangitis, hepatitis and pancreatitis all follow in the wake of acute infection in an obstructed gallbladder. Their prevention by early operation will give a lower morbidity and a lower mortality than the expectant plan of treatment with delayed operation."

In an effort to formulate opinions of our own we reviewed *250 unselected cases of gallbladder disease as they came to surgery. This group included chronic, subacute, and acute cholecystitis with and without stones. We encountered 28 cases of pathological acute cholecystitis, however a clinical pre-operative diagnosis had been made in 30 cases. Likewise, there were several cases in which a clinical diagnosis of chronic cholecystitis had

*From the Surgical Division of the Lexington Clinic.

been made in which the pathological diagnosis was either subacute or acute cholecystitis. This discrepancy in appraising the acute phase is not at great variance with the experience of other surgeons and is an additional incentive for a careful review of the various factors concerned in an effort to administer the best treatment. The behavior of acute inflammatory processes in the lower abdomen and pelvis can with some degree of accuracy be predicted by the leucocyte and differential blood counts. In the group of 28 cases of acute cholecystitis studied the leucocyte count varied from a low of 5200 to a high of 19,800 with an average count of 10,675. The clinical and pathological picture, however, did not always parallel the blood study. Bannick and others have emphasized the value of the sedimentation rate in following the progress of the disease and believe that failure to return to normal after proper conservative treatment may indicate impending rupture. This test was not made in a sufficient number of our 28 cases for us to formulate an opinion in regard to its value in this particular condition. Temperature elevations may likewise prove an insufficient index to the pathological evolution. In this series it has ranged from 98.6 to 104 degrees, and in most cases did not vary directly with the process. The inconstancy of the various laboratory tests makes us conclude that there is no substitute for sound surgical judgment in each case.

The duration of the attack varied from 3 to 30 days, with an average of 14.3 days. Those who insist on immediate surgery would in all likelihood attribute any complications in this group to this long period of surgical inactivity. Many of these cases, however, were not seen until late in their illness, but it may be said that the influence of time as a factor is subject to the same inconsistencies as is the laboratory. A few days after the onset you find very acutely inflamed gallbladders, and likewise weeks or months later you may encounter the same pathological picture. Time alone is not the sole factor in every case. Stones are encountered in 18 or 66 2-3 per cent of our 28 cases. Wesson and Montgomery in reporting 76 operative cases of acute cholecystitis found stones in 72 or approximately 95 per cent. Knuath found 92% of his series of 90 cases. This is a most significant finding since it affords a logical explanation of the obstructive nature of most cases of acute cholecystitis. Stones usually occlude the cystic duct and allow the development of a tensely distended viscus. Pressure necrosis or infarction frequently ensues and it is at this stage that infection is established. All evidence both experimental

and clinical seem to suggest this order of sequence.

Cholecystectomy was done in 26 and cholecystostomy in 2 of our 28 cases of acute cholecystitis which occurred in a series of 250 unselected cases of cholecystitis coming to surgery. There were 3 deaths or a mortality of 10.7 per cent as against 4.03 per cent in 222 cases of subacute and chronic cholecystitis.

An analysis of the causes of death in the three acute cases has great clinical significance since they well illustrate the three commonest causes of death in surgical gallbladder disease; namely hepatic insufficiency, sepsis and hemorrhage.

Case I had been ill 6 weeks, was much improved at the time of operation. Jaundice was recorded as 1, the leucocyte count was 6,600 and the general condition was considered satisfactory. A diffusely involved edematous, thickened acute gallbladder with stones was removed. Death occurred on the 13th post-operative day. The temperature had become elevated to 105 degrees and the patient was comatose. There was no vomiting or distention. The blood urea, sugar and blood culture studies were normal. This case probably represents hepatic insufficiency.

Case II. The patient had been ill but a few days and jaundice 11 plus was noted 3 days before operation. Laboratory studies and her general condition indicated surgical intervention. Death occurred on the 6th post operative day. The essential necropsy findings were an early diffuse peritonitis, right purulent pleural effusion, and intraperitoneal hemorrhage.

Infection and sepsis were the chief causes of death in this case with hemorrhage playing a contributing role.

Case III. The patient had been sick 7 days without jaundice. An acute diffusely involved gallbladder with stones was removed with ease. Death occurred 36 hours later. Nausea and vomiting were marked and sufficient hemorrhage occurred in the wound to necessitate reopening it. In all probability intraperitoneal bleeding likewise occurred. Necropsy was not obtained.

With these three major catastrophes in mind let us reconsider the views of the two schools on the treatment of acute cholecystitis. The advocates of delay believe that there is:

1. A lower mortality.
2. A lower incidence of complications (perforation, gangrene, peritonitis, abscess formations, etc.)
3. Greater ease technically in the later operation, and
4. Claim that from 90 to 95 per cent will

subside with conservative watchfulness.

The advocates of immediate operation insist that by their attack

1. The complications which result in the high mortality can be avoided.

2. Surgery is actually easier since the edema enables one to shell out the gallbladder; while later everything is likely to be fused (gallbladder, duodenum, colon, etc.) and that the inflammation infiltrates the tissues along the common duct and may lead to subsequent trouble.

3. Conservative treatment and delay is only palliative and that later surgery will be required after complications or liver damage have taken place.

The relatively low incidence of positive bacterial culture in the bile and gallbladder wall but the high percentage of stones in association with acute cholecystitis leads up to the belief that obstruction is the phenomenon of prime importance, and that the complications, gangrene, perforation, abscess and peritonitis are incident to its persistence. Treatment therefore should be directed toward its relief.

We maintain then that acute obstructive gallbladder disease characterized by a sudden onset, severe pain, marked tenderness and a palpable gallbladder mass calls for immediate surgery. Six to twelve hours, however, may be allowed in most cases for observation and administration of intravenous fluids. The acute cases conforming to the above description if seen later than 48 or 72 hours may to advantage be treated conservatively. The acute non-obstructive types without a palpable mass may be observed for 24, 36 or longer hours during which time intravenous glucose can be given, frequent leucocyte counts, and sedimentation rates made to be evaluated as a whole with the temperature, pulse, respiration and general condition.

All that has been said in regard to acute cholecystitis applies in a general manner and one must individualize each case for treatment.

BIBLIOGRAPHY

1. Abell, Irvin, Acute Abdominal Catastrophies, J. A. M. A., Oct. 16, 1937, 109:241.
2. Aronsohn, Hans G., and Andrews, Edmund, Experimental Cholecystitis, S. G. & O. B., April 1938, 66:748.
3. Branch, Charles D., and Zollinger, Robert, New Eng. J. Med., 1936, 214:1173.
4. Cave, Henry W., Immediate or Delayed Treatment of Acute Cholecystitis, S. G. & O. B., Feb. 1938, 66:308.
5. Clute, Howard M., Immediate Versus Delayed Surgery in Acute Cholecystitis, S. G. & O. B., Jan. 1938, 66:122.
6. Denton, T., Arch. Surg., 1927, 14:1.
7. Feinblatt, H. M., New Eng. Med., 1928, 199:1073.
8. Finney, Jno. M. T., Sr., quoted by Stoue and Owings.
9. Glenn, Frank, Surgery of the Gallbladder and Biliary Tract, Ann. of Surg., Jan. 1936, 103:76.
10. Graham, Roscoe, Canadian M. Assoc. J., 1935, 32:283.
11. Heuer, G. J., The Factors Leading to Death in

Operations Upon the Gallbladder and Bile Ducts, Ann. of Surg., 1934, 99:881.

12. Heyd, Charles Gordon, Complications of Gallbladder Surgery, Ann. of Surg., Jan. 1937, 105.

13. Kunath, Carl A., S. G. & O. B., July 1937, 65:79.

14. Lahey, Frank, Discussion, Abell's, Irvin, Acute Abdominal Catastrophies, J. A. M. A., Oct. 16, 1937, 109:1241.

15. Smith, M., Treatment of Acute Cholecystitis, Trans. Am. Surg. Assn., 1933, 51:287.

16. Stone, Harvey B., and Owings, James C., Ann. Surg., 1933, 98:760.

17. Walton, A. J., Textbook of Surgical Dyspepsias, 1st Ed., p. 512.

18. Wesson, H. R., and Montgomery, T. R., Acute Cholecystitis, Proc. of the Staff Meeting of the Mayo Clinic, Aug. 11, 1937, 12:500.

19. Wilkie, A. L., Bacteriology of Cholecystitis (clinical and experimental study) Brith. J. Surg., Jan. 1928, 15:450.

20. Zininger, M., Surgical Treatment of Acute Cholecystitis, Ann. of Surg., 1933, 96:406.

21. Graham, Henry F., Ann. Surg., 1931, 93:1152.

HOARSENESS AND COUGH*

M. G. BUCKLES, M. D., F. A. C. P.

Louisville.

The object of this presentation is to lay emphasis on the clinical significance of cough and hoarseness as they occur singly and together, to point out the association of the two and to delve somewhat into the causes of each. The relationship is striking at times and so frequently either may be the clue to involvement in the chest.

Hoarseness is often considered as an independent single condition localized in the larynx; the clinical importance being underrated because of lack of association with systemic or chest conditions. Hoarseness has been defined as change in the voice quality with lowering of the tones. It has been well said that hoarseness of one week's duration demands thorough examination of the larynx and frequently requires an examination of the chest.

It can be said that hoarseness is due to one of three causes until proved otherwise: Namely, tuberculosis, syphilis, or cancer. The necessity for the early differentiation of these conditions is that prognosis in all three is good if detected early; fatal if not recognized.

(1) TUBERCULOSIS—Although hoarseness is not the earliest symptom of tuberculous laryngitis, it is the one of which the patient complains and the one for which he consults the physician. It is to be remembered that tuberculosis of the larynx is always secondary to tuberculosis of the lungs. In case the physician is not familiar with examination of the larynx, the diagnosis can frequently be made by examination of the sputum for tubercle bacilli and X-ray of the chest.

There is no such thing as primary tuberculosis of the larynx. The prognosis of this con-

*Read before the Kentucky State Medical Association, Louisville, October 3-6, 1938.

dition has been completely changed since the advent of the cautery method of treatment, which we prefer to do directly through the laryngoscope. If recognition of the laryngeal condition is delayed the chest may get entirely beyond control.

(2) **SYPHILIS**—Syphilis of the larynx is not uncommon and is frequently seen as a secondary manifestation, although gummata of the larynx do occur. In the secondary stage the involvement of the larynx is generalized or diffuse in contrast to the posterior involvement as in tuberculosis. The diagnosis depends upon history, appearance, serological studies and the exclusion of tuberculosis and cancer. The response is good under proper antiluetic treatment.

(3) **CANCER**—Cancer if diagnosed early responds well to surgical treatment. In the majority of cases it is also somewhat radio-sensitive so that with either, or a combination of the two, the prognosis is fairly good. The lesion starts unilaterally and usually involves the anterior portion of the larynx. It is to be borne in mind however, that a subglottic lesion may exist which is difficult to visualize. The diagnosis of cancer depends not only upon appearance but also upon biopsy.

In the examination of the larynx in general we feel that we cannot overemphasize the importance of direct laryngoscopy where there is any doubt as to the differential diagnosis.

Syphilis and tuberculosis may occur simultaneously in the same patient; one report of a combination of tuberculosis and cancer occurs in the literature. Hence it may be said that a positive Wasserman does not exclude the presence of either tuberculosis or carcinoma when a laryngeal lesion is under consideration. Therefore examination of the sputum, X-ray of the chest and biopsy should always be considered.

After the exclusion of the above conditions we can next consider the neurological causes of hoarseness—the common one being paralysis of the recurrent laryngeal nerve by impingement at any point throughout its course. Lesions of the chest which may cause it are: chronic fibroid, tuberculosis, tumor, pleurisy and aneurysm. Bilateral paralysis of the recurrent laryngeal is rare secondary to pulmonary conditions.

Non-specific laryngitis occurs secondary to bronchiectasis, chronic tracheo-bronchitis and other chronic suppurative conditions of the lungs and bronchi. Relief is obtained by proper treatment of the underlying cause.

Local conditions such as polypi, singer's nodes, contact ulcer, foreign body, traumatic

conditions, thyroid involvement and allergic manifestations are not infrequent.

We again wish to emphasize the necessity of a careful history, mirror and direct laryngoscopic examination coupled with X-ray of the chest whenever the etiology of hoarseness is being considered.

Cough has been defined as "the watchdog of the chest." Briefly, from a physiological standpoint, the cough is a reflex act set up by irritation of the sensory endings of the pharyngeal and laryngeal divisions of the glossopharyngeal. Nerve and the sensory endings of the vagus. The latter supplies a portion of the ear, larynx and all the trachea, bronchi, parenchyma of the lungs and pleura. Ear disease may occasionally cause cough by irritation of the auricular division of the vagus.

The act of coughing may be divided into three phases:

(1) Inspiratory, in which the chest is filled with air.

(2) Compressive, in which there is closure of the glottis by approximation of the false cords; contraction of the muscles of respiration, lowering of the thoracic cage and contraction of the abdominal muscles.

(3) Expulsive, in which all expiratory muscles are brought into play plus a martial opening of the glottis. The blast of air thus released tends to carry with it any irritative agents in the bronchi. It has been estimated that the air thus escaping through the glottis may reach a velocity of twenty miles per hour.

Clinically, we have used the bronchoscope to study a large series of cases in which cough was the chief complaint and try to determine the cause of the irritation which was obviously causing the cough. We feel that it has definitely altered our trend of thought concerning the chronic cough. Careful history, physical examination, fluoroscopic, X-ray and lipiodol studies have been greatly augmented by the use of the bronchoscope to visualize that large neglected portion of the chest, namely, the trachea and bronchi. Many of these cases fail to show changes on X-ray examination, yet we know the patient to be chronically ill due to persistent cough, recurrent fever, expectoration and general loss of well being.

We wish to mention briefly some of the more common causes of the chronic cough. One of the important ones is tracheo bronchitis, because of the frequency with which it occurs and because if neglected it may lead to more serious pulmonary involvement. In this condition the cough is frequently out of proportion. Physical and X-ray findings

are absent or of little significance; but on bronchoscopic examination we find a generalized irritation of the entire tracheo-bronchial tree with marked edema, swelling and hypertrophy of the mucous membrane and diminution in the size of the lumen of the bronchi.

If allowed to continue this partial obstruction to the proper drainage of the already infected bronchi can easily result in dilatation of the weakened bronchial walls and finally in bronchiectasis itself.

Contrary to general opinion, cough and not pain is one of the early symptoms of pulmonary malignancy. Any individual over 40 years of age with a persistent cough should be given the benefit of a thorough examination to rule out the possibility of a bronchogenic carcinoma.

All asthmatics cough, and those with asthmatic manifestations due to an infectious tracheo-bronchitis are no exceptions. Cultures of the bronchial secretions aspirated with the bronchoscope often give a clue as to the causative agents when other tests have proved unsatisfactory.

Time forbids us more than mentioning the cough producing possibilities of lung abscess, cardiac failure, empyema, tuberculosis, silicosis, fungus disease, atelectasis, tumor of the esophagus, aneurysm, foreign bodies and "unresolved pneumonia." We feel that we cannot overemphasize the necessity for the thorough investigation and eradication of the chronic cough.

DISCUSSION

Benjamin Brock, Waverly Hills, Louisville: Naturally we in tuberculosis work are enthusiastic about tuberculosis; we think about it daily; it is just part of us. We could not expect the general practitioner to regard it in the same light that we do, necessarily, but we would like for him to become more enthusiastic about tuberculosis; in other words, what we want is early diagnosis of pulmonary tuberculosis. It is only in this way that we will really ever get any where in the tuberculosis movement.

When we think of the sanatoria throughout the country being filled with advanced cases and very few minimal or early cases present in these institutions, we can see the importance of tuberculosis, from the public health standpoint. What would be ideal, I think, so far as the general practitioner is concerned, would be for him to examine the chest of every patient coming to his office; particularly would that be true of patients having any symptoms or signs referable to the chest. After the physician has examined the chest and

finds nothing present within it so far as the stethoscope is concerned, that by no means eliminates pulmonary tuberculosis. We have found, for example, that only about 25 per cent of cavity cases show any definite sign of cavity formation on physical examination. We know if this is true that only a very few cases of minimal tuberculosis show physical signs. In other words, when definite physical signs and symptoms of pulmonary tuberculosis are present we are dealing with an advanced case of disease. We will have to resort, therefore, to some such program as I have mentioned, the routine examination of the chest by the physician, and, better still, the routine x-ray examination by the physician, even if he gets only a flat plate; this would be particularly important in any case having any symptoms referable to the lungs, whether they be symptoms of tuberculosis or symptoms of a non tuberculous pulmonary condition.

As to the etiology of some of these non-tuberculous conditions, particularly tracheobronchitis and bronchiectasis, I wish to mention some work which Dr. Joseph C. Bell of Louisville and I did about a year ago. The work has been recently published in the American Review of Tuberculosis, on the incidence of sinus disease in a tuberculosis sanatorium. In a study of 306 cases admitted consecutively to the Waverly Hills Sanatorium we found an incidence of 40 per cent of sinus disease. This doesn't mean that all these cases had active sinus disease. Many of them showed signs of thickening of the mucous membrane. Of these we found thirteen cases of uncomplicated bronchiectasis. Of this number, 77 per cent had advanced accessory nasal sinus disease. We also found twenty-seven cases out of this number of so-called tracheobronchitis, which Dr. Buckles mentioned in his paper. Thirty-nine per cent of these patients had active sinus disease. I think if we are to prevent bronchiectasis we should begin with the tracheobronchitis cases and clear them up; in other words do a radical sinus operation if it is indicated, or treat them otherwise, and the chest condition should clear up.

I want to mention some work that we have been doing at Waverly Hills on postural treatment in pulmonary tuberculosis, particularly in those cases complaining of a very tenacious cough and expectoration. By raising the foot of the bed about twelve inches, these patients; in 82 per cent of the cases have begun to improve within twenty-four to forty-eight hours so far as cough and expectoration are concerned.

I might say that most of these cases selected were those that had been treated previously by other means such as attempted pneumothorax and bed rest, without success. Thirty-three per cent of the cavity cases in this group—and I

might say all of these were far advanced cases, closed on this method of treatment. All of these patients that I mentioned had been treated over many months on routine bed rest before this treatment was begun.

Oscar O. Miller, Louisville: In regard to cough, I imagine the aurists and the nose and throat men must see many examples of infection in the middle ear or the auditory canal that produce a dry irritative cough.

A point to be emphasized is that tuberculosis of the larynx is never primary. Sometimes a laryngologist may be tempted to continue treating a case of tuberculous laryngitis and ignore the chest lesion. Tuberculosis of the larynx will frequently improve when the patient is placed on routine treatment for the pulmonary tuberculosis. Very often rest of the voice and control of the cough will clear up the early or minimal laryngeal involvement.

It is desirable in the examination of the chest that one should resort to fluoroscopy and x-ray. I think fluoroscopy in some respects has an advantage over the flat x-ray film or even stereoscopic films in selected cases; because with fluoroscopy one can look at the patient anteriorly, posteriorly, the four oblique and the left and right lateral positions. It is interesting to note the amount of pathology one is able to see by rotating the patient on these various positions. Unsuspected pathology frequently flashes into view while the patient is being turned.

Any patient who has a cough persisting over three weeks should be carefully investigated for the possibility of tuberculosis. Above all, those cases that have a persistent cough and for which physical and x-ray examination fail to elicit the cause should have a bronchoscopic examination.

Endobronchial carcinoma is one of the prime factors in persistent paroxysmal cough. The only hope for these lesions is surgery, and the only hope for surgery is early diagnosis.

BOOK REVIEWS

YOU CAN SLEEP WELL: By Edmund Jacobson, M. D., author of "You Must Relax." Illustrated. Whittlesey House, McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York. Price \$2.00.

Sleep is a blessing only if it provides complete rest. If you spend exasperating hours trying to get to sleep, toss incessantly when sleep finally comes, or dream frequently, you are not getting complete rest. In the morning you are almost as tired as the night before—nervousness, listlessness, worry, and general lack of both mental and physical energy impair your working efficiency and your resistance to disease.

In the laboratories of the University of Chicago and in his own Laboratory for Clinical Physiology, Dr. Jacobson has worked out

a method by means of which you can achieve better rest. He has spent thirty years studying the phenomena of sleep and relaxation, constantly checking and applying the results of that study in actual practice. This book is the outcome of a lifetime's experience. Its detailed information is clearly presented, helpful, and authoritative. Dr. Jacobson presents six concise and easy-to-follow steps toward restful sleep. He also discusses the general problem of relaxation, and such important topics as drugs, dreams, and your child's sleep. Of particular interest are the chapters in which he describes the interesting scientific experiments he has used in developing his methods.

This is a book not only for the confirmed insomniac, but for normal people, doctors, nurses—everyone who wants to get the most out of his sleep.

DISEASES OF THE SKIN FOR PRACTITIONERS AND STUDENTS: By George Clinton Andrews, A. B., M. D., Associate Professor of Dermatology, College of Physicians and Surgeons, Columbia University; Chief of Clinic, Department of Dermatology, Vanderbilt Clinic; Fellow of the American Medical Association, of the American College of Physicians, and of the New York Academy of Medicine. Second Edition, Entirely Revised. 899 pages with 938 illustrations. Philadelphia and London: W. B. Saunders Company, 1938. Cloth, \$10.00 net.

A text book on skin disease that is comprehensible to the average practitioner is the aim of the author of this volume. As dermatology has advanced rapidly in the last few years revision of every chapter has been necessary in this latest edition. The description of 75 new diseases has been added and new chapters on dermatosis due to filterable viruses, vitamin deficiencies and cutaneous infiltrations with products of metabolism, fungous diseases.

The illustrations are numerous and instructive making this a valuable volume of the medical profession.

A TEXTBOOK OF BACTERIOLOGY: By Thurman B. Rice, A. M., M. D., Professor of Bacteriology and Public Health at the Indiana University School of Medicine. Second Edition, Revised. 563 pages with 121 illustrations. Philadelphia and London: W. B. Saunders Company, 1938. Cloth, \$5.00 net.

This Bacteriology was written for the medical student. In it Dr. Rice effectively meets the growing demand for a Bacteriology that is confined to the practical application of the science to the practice of everyday medicine. He applies bacteriology to etiology, diagnosis,

prognosis, the collection of laboratory specimens, interpretation of laboratory findings, treatment, prophylaxis, and sanitary control. He avoids long technical descriptions and theoretical discussions, but everything is here that the student needs, told concisely and clearly.

OUTLINE OF ROENTGEN DIAGNOSIS, AN ORIENTATION IN THE BASIC PRINCIPLES OF DIAGNOSIS BY ROENTGEN METHODS, STUDENTS' EDITION: By Leo G. Rigler, B. S., M. B., M. D. Professor of Radiology, University of Minnesota. The Atlas Edition. 254 illustrations shown in 227 figures, presented in drawings and reproductions of roentgenograms. Figures 6 to 51 and 55 to 72 are drawings in an original technic by Jean E. Hirsch. Price \$6.00. J. B. Lippincott Co., Publishers, Philadelphia.

Dr. Rigler's book is made up in two formats. One in which the 254 illustrations and X-ray are grouped in atlas fashion with numerous references and cross references in the text to the Atlas section, the other is a student edition from which the Atlas has been omitted and is priced at \$3.00.

The unique drawings by Hirsch and the comprehensive discussion of the technic combine to make this volume of great usefulness to the physician and surgeon.

ESSENTIALS OF OBSTETRICAL AND GYNECOLOGICAL PATHOLOGY WITH CLINICAL CORRELATION. By Marion Douglass, M. D., F. A. C. S., Assistant Professor of Gynecology, Western Reserve University and Robert L. Faulkner, M. D., Senior Clinical Instructor in Gynecology, Western Reserve University. With 148 illustrations. C. V. Mosby Company, Publishers, St. Louis. Price \$4.75.

This volume will be found very useful for students, hospital staffs and internes who do not have the time nor the benefit of systematic training in pathology. The plan of the book is to picture and discuss briefly from a clinical point of view the normal histology and common or important pathology of structures from the lower genital tract upward.

By keeping the text simple and the pictures those of normal histology and commonly seen pathology the manual is practically helpful to students beginning his acquaintance with special pathology of his field and to the clinician who may want to review the essential histopathology of his specialty.

HUMAN PATHOLOGY, A TEXTBOOK. By Howard T. Karsner, M. D., Professor of Pathology, Western Reserve University, Cleveland, Ohio. With introduction by Simon Flexner, M. D. 18 illustrations in color and 443, black and white. Fifth Edition. Revised. J. B. Lippincott, Publishers, Philadelphia.

No chapter in this new edition has escaped alteration, much new material has been added and all the chapters dealing with new data have been lengthened, over two hundred new references have been added to the bibliography.

There is also new material in the study of inflammation and tumors, Prof. C. J. Wiggers has given valuable suggestions concerning circulatory disturbances and cardiovascular disease. Dr. Franklin Miller has guided a rewriting of much of the text on hemopoietic system. Dr. H. S. Reichle has aided in the matter of tuberculosis. Dr. A. T. Steegmann has made suggestions as to diseases of the central nervous system. The subject of diseases of the pancreas has been clarified by a rearrangement of the text.

Several new illustrations have replaced older pictures. The author has made a notable addition to medical literature on pathology.

SCARLET FEVER: By George F. Dick, M. D., D. Sc., Professor of Medicine, University of Chicago; Attending Physician, Billings Memorial Hospital; Editor, Department of Infectious Diseases, The Year Book of General Medicine, and Gladys Henry Dick, M. D., D. Sc. The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago, Illinois, 1938.

This is a concise monograph on scarlet fever which should prove of real value to private practitioners, health officers and laboratory workers. The volume is small, containing only 149 pages, and is printed in large, easily readable type. The chapters are short, yet contain, in essential detail, the information which each is designed to cover. In it the Doctors Dick bring to the physician an easily comprehensive summary of their three decades of work in connection with scarlet fever.

Within the pages of this volume the general practitioner will find all the necessary knowledge concerning the cause, diagnosis, treatment and active immunization against scarlet fever. The chapter on the etiology of the disease gives him, to a readily understandable degree, the reason and procedures which led to the identification of the haemoly-

tic streptococcus of the scarlatina type as the causative agent of the disease. That on pathological anatomy gives him the tissues and organs affected, together with the anatomical changes produced. The onset, the angina, the rash, the strawberry and raspberry tongue, the temperature and the blood picture are all graphically described. Color plates illustrate, in a natural way, such symptoms as the rash, the manifestations of the tongue and the Schultz-Carlton tests. The different varieties of scarlet fever are listed, together with the complications which may be expected and the frequency of their occurrence.

The chapter on treatment of the disease gives its non-specific therapy in detail. Hydrotherapy, together with care of the mouth and throat, the nose and sinuses and the ears, is given. The role of sulfanilamide in the treatment of scarlet fever and its complications is discussed. The specific therapy of the disease with antitoxin is considered in detail—when the antitoxin is to be given, its effect on the clinical manifestations, the complications and the persistence of the haemolytic streptococcus in the throat.

To the health officer, the public health aspects of the disease, which are discussed in detail, should be of especial interest. The set-up is given for controlling, in the shortest possible time and with the least hardships, outbreaks in schools and institutions. Such questions as length of quarantine, how to handle family contacts, immune carriers and susceptible carriers are all answered. The interpretation of the Dick Test, illustrated by color plates, is given, together with a discussion of the method of grading dosage of the immunizing toxin according to the size and intensity of the skin test.

Teachers, laboratory workers and research workers will all find needed information in the chapters on how to prepare scarlet fever toxin, specificity of haemolytic streptococci, allergy, antibacterial immunity, local immunity and oral administration.

A SYNOPSIS OF THE DIAGNOSIS OF THE ACUTE SURGICAL DISEASES OF THE ABDOMEN: By John A. Hardy, B. Sc., M. D., F. A. C. S., El Paso, Texas. With 92 illustrations. C. V. Mosby Company, Publishers, St. Louis. Price \$4.50.

General practitioners as well as surgeons will welcome this concise brief discussion of so timely a subject. The text is well illustrated, the book concisely written—but still covering all the major points in diagnosis and treatment.

SYNOPSIS OF DIGESTIVE DISEASES: By John L. Kantor, Ph.D., M. D., Associate in Medicine, Columbia University, Gastroenterologist and Associate Roentgenologist, Montefiore Hospital for Chronic Diseases, New York. Illustrated. C. V. Mosby Publishers, St. Louis. Price \$3.50.

This book is an attempt to present simply, clearly and concisely, the essential facts concerning the diseases of digestion. In preparation of this volume the author has drawn on his clinical records for much of his basic statistics as well as his practical experience in teaching gastroenterology, to undergraduate and graduate students.

The illustrations, most of them original, were all drawn especially for the author by Mr. Alfred Feinberg which include several synoptic charts devised for diagrammatic presentation of the more important diseases.

Special diet forms are also included.

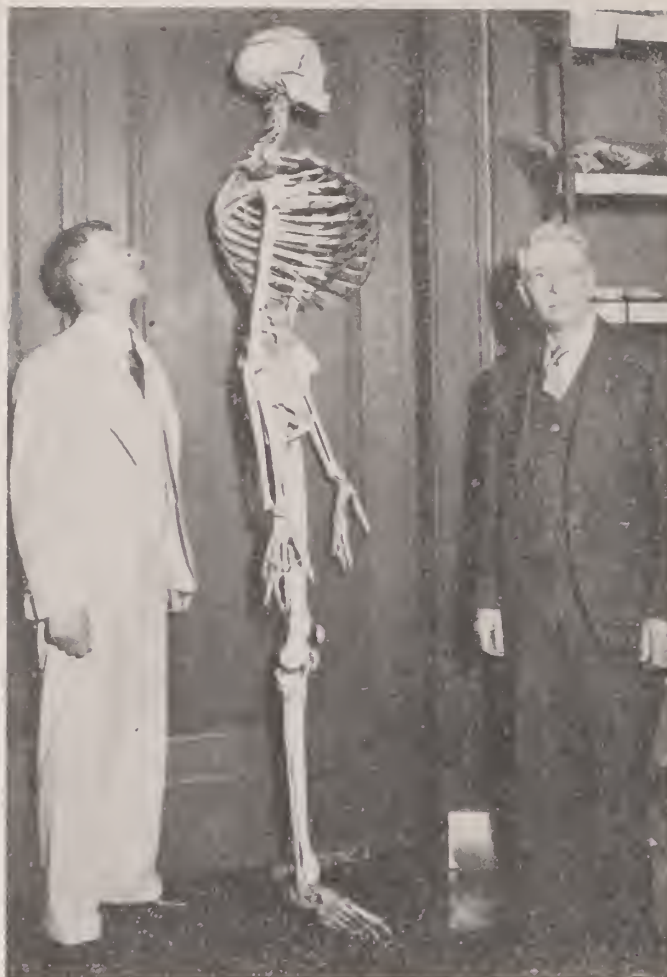
THE PRACTICE OF MEDICINE: By Jonathan Campbell Meakins, M. D., LL.D., Professor of Medicine and Director of the Department of Medicine, McGill University, Physician-in-Chief, Royal Victoria Hospital, Fellow of the Royal Society of Edinburgh, Fellow of the Royal Society of Canada and American College of Physicians. Second Edition with 541 illustrations including 43 in color. C. V. Mosby Company, Publishers, St. Louis. Price \$12.50.

This book continues to be a leader in its field, and many chapters have been revised and much new material added. It covers every phase of the practice of medicine in an authoritative style, the entire text is of exceptional quality. Among the many subjects that have been amplified or added to may be mentioned Friedlander pneumonia, protamine zinc insulin, experimental nephritis, vascular renal failure, sulphanilamide therapy, epidemic pleurodynia. As much factual data are capable of graphic records the author has diverted from the usual custom in text books in the practice of medicine and has inserted many illustrations to assist in clarifying the subject under discussion.

HEART DISEASE AND TUBERCULOSIS, EFFORTS INCLUDING METHODS OF DIAPHRAGMATIC AND COSTAL RESPIRATION TO LESSEN THIS PREVALENCE: By S. Adolphus Knopf, M. D., New York University and Paris.

The Livingston Press, Livingston, Columbia County, New York. Price \$1.25.

This book is issued by the patients at the Potts Memorial Hospital for the rehabilitation of the tuberculous. It is amply illustrated and written in a pleasing style.



THE MUTTER MUSEUM SKELETON OF THE KENTUCKY GIANT

In the Mutter Museum of the College of Physicians of Philadelphia there is a mounted skeleton of an acromegalic giant which is the largest and most spectacular that can be seen in America. It was minutely and exactly described by Dr. Guy Hinsdale in 1898, (*Acromegaly, Medicine, Detroit, Vol. 4, pp. 441-459, 529-538, 627-650, 724-739, 813-830,*) and has recently been discussed again in a more popular vein by Dr. Joseph McFarland (*Notes on the Mutter American Giant, Trans. and Studies of the College of Phys. of Philadelphia, Sept., 1938, 4th Ser., Vol. 6. No. 2, pp. 148-158.*)

The origin of this astounding skeleton is shrouded in mystery, and it is impossible to learn anything of his case-history during life from any records now available. It is known only that his body was secured, in 1877, from some unknown locale in Kentucky; presumably, of course, it had been stolen from a cemetery. It was shipped to Philadelphia in a barrel of alcohol, and was sold for \$500.00.

In connection with some of my own studies on Giantism (*Jour. Am. Med. Assn., 106:1713; 108:544; Med. Record, 147:444, Jour. Mo. Med. Assn., 33:265, Southern Med. Jour., 31:988, etc.*) and my recent removal of the skeleton of "The Minneapolis Giant" (*Annals of Int.*

Med., 10:1669) I have examined the Mutter Museum specimen with particular care. Because we have so very few other similar museum pieces for comparisons, particularly in America, it is difficult indeed to hazard any guesses as to the Mutter giant's age, or physique, or race; there could even be a doubt about the sex. It would be highly desirable to have a case-history, however meagre, of this remarkable person, and since sixty years would now completely "outlaw" the resurrection, and the grief of outraged relatives would now be thoroughly assuaged by time, it occurs to me that an attempt should be made to learn something of value about this giant's life.

I now have a monograph on Giantism in active preparation. A considerable account will be given of the Mutter Museum skeleton, and with it I would like to include any available details on his case-history during life. So I would much appreciate hearing from any of your older readers who recall boyhood gossip of a sickly and rheumatic young giant, with malformed chest and twisted spine and a most ungainly frame, of unbelievably huge size, who lived a very obscure life in Kentucky and who died about 1876, unhonored with any report in medical literature.

Address any information to

CHARLES D. HUMBERD, M. D.

Barnard, Missouri

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NEXT MEETING: BOWLING GREEN

EDITORIALS

STATE BOARD OF HEALTH ACTION OF IMPORTANCE TO PHYSICIANS

The State Board of Health held an all-day session on Saturday, January 7, at its offices at 620 South Third Street, the following members being present: Drs. J. Watts Stovall, acting President, Grayson; John H. Blackburn, Bowling Green; W. H. Fuller, Mayfield; George S. Coon, Louisville; E. L. Gates, Greenville; Carl J. Johnson, Louisville; A. T. McCormack, Secretary and Mr. C. B. Davis, Louisville.

Carrying out the approval in principle of plans for the medical care of the indigent and the medically indigent, a Committee of the State Medical Association composed of Drs. Irvin Abell, Chairman of the Committee on Public Relations, A. C. McCarty, Chairman of the Committee on Medical Economics and E. L. Henderson, Chairman of the Committee on the Study and Provision of Medical Care, the Council of the State Medical Association unanimously recommended to the Board that it request the Governor to approve the creation of a Bureau of Medical Service so that a study could be made in co-operation with the County Medical Societies of the State with a view to their developing plans which will be satisfactory for each county in the State.

The Board authorized the creation of a Bureau of Medical Service in the Division of Local Health Work in the State Department of Health whose duties shall be to assist the legally qualified and registered medical profession of Kentucky in providing complete services for the indigent and the medically indigent residents of the Commonwealth. Any county plans to be approved must provide for the absolute freedom of choice of the legally qualified physician who shall serve them from all those qualified to practice who are willing to give service and shall not provide for restrictions on the plan or method of treatment except such as are determined in each county to be necessary for the protection of the public health. It is also provided that any expenditures made for the expansion of public health and maternal and child health services should not include the treatment of disease except as far as this cannot be successfully accomplished through the legally registered practitioner.

The Board defined a person as medically indigent when he is unable, in the place in which he resides, through his own resources, to provide himself and his dependents with proper medical, dental, nursing, hospital, pharmaceutical and therapeutic appliances and care without depriving himself or his

dependents of necessary food, clothing, shelter and similar necessities of life.

Dr. A. T. McCormack, State Health Commissioner, states that it should be made clear that it involved no change in the methods of medical practice which for years have received the approval of both the people and the medical profession of Kentucky. It is the intention of the medical profession of the State to cooperate with other agencies in the improvement of facilities for the prevention and treatment of the indigent sick. Heretofore, outside of the cities of the State, this has been the burden of the medical profession itself, almost entirely, and this burden has become too great for them to bear alone and they will ask the cooperation of the State and its counties and cities in providing plans for the solution of the problem. He says that too much should not be expected immediately, as changes will necessarily be voluntary in character and can only be made effective in the near future in those cities and counties that are financially able to carry such plans. Such programs have already been successfully developed in Fayette, Mercer, Kenton and Jefferson Counties and will be extended to other counties in the State as rapidly as the agencies in those counties are able and willing to undertake them.

The Council of the State Medical Association recommended the appointment of Dr. John B. Floyd, of Richmond, as Director of the Bureau of Medical Service, and stated in their recommendation that he is a cultured, splendidly qualified physician, had a noteworthy and successful experience in hospital administration as Superintendent of the Waverly Hills Sanatorium, was a successful general practitioner in one of the poorer sections of Edmonson County for two years, and in Richmond for a number of years, during which time he was on the staff of the Pattie A. Clay Memorial Hospital and a member of its Board. At a great sacrifice to himself, he went to the Legislature for two terms, where he learned methods of contact with and operation of public agencies, and that for the last two years, he has been Director of the Bureau of Tuberculosis of the State Health Department, and in this capacity, he has shown a fine spirit of cooperation with the physicians and people of the State. The Council stated that the independence of his course in the Legislature "shows him to be polite, rather than political."

The Board also adopted regulations under the recently enacted Non-Profit Hospital Insurance law, as follows:

Since it is understood that there is in every community, a group of people below the "comfort level" on whom the unexpected

costs of medical care impose a heavy burden; and since these are self-respecting people of the salaried or wage-earning classes in most instances, whose living expenses are met from their salaries or wages; and, since, for them, the most burdensome part of medical costs are charges for hospital and nursing care; and, since it is the purpose of this Act that adequate hospital care shall be given to such people, the State Health Commissioner is instructed to approve only such hospital insurance plans and such hospitals for operation under this Act as shall develop the details of their operation to conform with the principles and policies herein below set forth:

1. Hospital care shall mean provision of bed, board, general nursing service, customary surgical dressings and medicines and other facilities of the institution not including medical care as defined in Section 2 of these Regulations.

2. Medical care shall mean any procedure or service ordinarily rendered by a physician holding a certificate under the Medical Practice Act of the Commonwealth of Kentucky.

3. Hospitals making contracts with non-profit hospital service corporation shall not implicate themselves with conditions inconsistent with the principles and definitions contained in these Regulations.

4. The operation of such hospital insurance in any community shall not discriminate between approved institutions either voluntary or proprietary, and hospitals operating under the provisions of this Act shall not discriminate between the approval non-profit service corporations furnishing such insurance.

5. Except in actual emergencies, admission of patients for care under the benefits of such hospital insurance shall be only through reference from a private practicing physician.

6. Certificates of insurance by such corporations shall specifically state the insurance does not provide for any medical care as defined in section 2 of these Regulations. The actual wording of the certificate must be approved by the State Health Commissioner, as provided by law.

The Board further provided that hospitals should provide hospital care for insured without additional charges above their insurance income, unless they voluntarily insisted upon the use of more expensive room or facilities.

The Board adopted regulations prohibiting the feeding of uncooked offal and garbage to hogs in order to prevent the spread of trichinosis. Recent studies over the en-

tire country by the U. S. Public Health Service have definitely proven an enormous and alarming increase in the infestations from trichinae, especially of those living in the cities. Under the order, offal or garbage must be cooked for thirty minutes, at least, at a temperature of not less than 170 degrees Fahrenheit, if it is to be fed to hogs. The public is advised that there is no danger in eating well cooked pork or pork products, but that it should not be eaten when it is not well cooked, or raw.

Plans for the development of 110 sewage plants and extensions, and for water and water purification systems, and a number of plumbing installations for schools, swimming pools, utility areas, camps, court houses, hospitals, jails and other public buildings, were approved.

THE NEW FEDERAL FOOD AND DRUG ACT

Kentuckians and physicians can get a great deal of satisfaction out of the new Federal Food and Drug Act, passed at the recent session of Congress. Of course, many men worked to perfect this law, but its best provisions are a result of the untiring, sincere and intense work of Congressman Virgil Chapman of Paris and of Mr. Mapes of Michigan and of the late Senator Copeland of New York. Senator Copeland probably lost his life as a result of his arduous labors in conference committees in the perfecting of this bill.

In addition to the conventional provisions for control of toleration of imported and interstate food and drugs, as in the existing law passed in 1906, there is now included control of cosmetics, therapeutic devices, and those which affect the structure or any function of the body of man or animals, and the Department of Agriculture, through its Food and Drug Administration is empowered to set up definitions and standards for foods which will have the force of law. The traffic in food injurious to health is prohibited, whereas heretofore the law has applied only where injurious components had been added.

Such drugs or devices as are dangerous under the conditions prescribed on the label are prohibited, and if any drug which is not standard differs from the standard it professes to meet this must be stated on the label, and also, drugs departing from standards as set up by the United States Pharmacopoeia or National Formulary must state in what way they differ from such standards and even the details of packaging set up in

the United States Pharmacopoeia and National Formulary must be met. Labels must carry a warning against the habit-forming drugs and details both as to use and misuse. Non-official drugs and remedies must have the names of active ingredients on the labels and there is provision against the use of containers that might be injurious to the contents, against slack filling, and package of deceptive shape. Antiseptics must have germicidal value.

A special advantage over the old law is the elimination of the necessity of proving fraud in case of misbranding medicines. This will be a great help in proper and reasonable enforcement. Increased penalties have been provided, as well as an injunction procedure.

The Act relative to new drugs is effective at once, as it is the prohibition of drugs dangerous in the doses prescribed on the labels and certain other features. The major portion of the law becomes effective twelve months from the date of its enactment but the Department of Agriculture is empowered to begin at once the formulation of standards, preparation of regulations and the holding of such hearings as may be necessary in paving the way to enforce actively the several provisions. Unfortunately, the control of advertising was separated from the Food and Drug Act and the responsibility was placed on the Federal Trade Commission and the public should demand of the Federal Trade Commission the greatest care in its work. The public has the right to know the truth in the advertising of products which would come under the new law.

While the new law is not at all perfect, it is a big improvement and the Journal is especially proud of the important part Mr. Chapman played in placing in it most of the things of real value for the protection of the people.

THE LOWLY CARROT

Through the centuries, the carrot has been recognized as a very valuable vegetable. Our grandmothers called it the intestinal broom; its juice, mixed with sulphur and molasses, constituted their favorite spring tonic or blood purifier. Carrots contain sodium, iron, iodine, silicon, chlorine, calcium, potassium and sulphur, together with Vitamins A, B, C, D, G and E. Because of their richness in Vitamin A, carrots are used to produce an extract known as carotin, which is largely recommended to build up body resistance against disease.

Breeders and owners of show animals add

carrots to the diet of such animals to improve their sleekness and health.

This vegetable, in the raw state, is a very valuable adjunct to the diet of expectant and nursing mothers. The juice of the carrot may be easily extracted by using an ordinary fine tooth grater. Select fresh large carrots, wash them thoroughly, but do not peel, and then grate. Moisten the pulp with equal parts of water and strain through cheese cloth; cool and serve the same day as prepared. The juice should be made daily, as it loses much of its value after the first day of its preparation. The addition of lemon juice adds greatly to its flavor.

SOUTHERN SURGICAL CONGRESS

The Southeastern Surgical Congress will hold its Tenth Anniversary Post-Graduate Surgical Assembly in Atlanta on March 6, 7 and 8, 1939 at the Biltmore Hotel. For information, the profession of Kentucky will remember to write B. T. Beasley, Secretary-Treasurer, 701 Hurt Building, Atlanta.

Many members of the profession of Kentucky enjoyed the sessions of this splendid organization in Louisville last year. Among the distinguished members of the faculty this year will be Drs. Irvin Abell, W. O. Johnson and George A. Hendon of Louisville, and Fred W. Rankin of Lexington; other names on the program are among the most distinguished in surgery, and the subjects presented will cover the entire field of modern surgical procedures.

KENTUCKIANS HONORED

From the January issue of the Southern Medical Journal, we note that the following Kentuckians were honored at the recent meeting of the Southern Medical Association at Oklahoma City.

E. L. Henderson, Louisville, continues as Councilor; Irvin Abell, Louisville, Chairman of the Board of Trustees; Virgil E. Simpson, Louisville, Chairman of the Section of Medicine; S. Spafford Ackerly, Louisville, Vice Chairman of the Committee on Neurology and Psychiatry; W. O. Johnson, Louisville, Secretary of the Section on Gynecology; P. E. Blackerby, Louisville, Secretary-Treasurer of the Southern Branch of the American Public Health Association; R. D. Sanders, Louisville, Vice President of the Southern Association of Anesthetists and Miss Grace Stroud, Louisville, Recording Secretary of the Woman's Auxiliary of the Southern Medical Association.

COUNTY SOCIETY REPORTS

Letcher: The Letcher County Medical Society held its annual meet in the basement of the Whitesburg Presbyterian Church Tuesday night, January 10th. A very excellent chicken dinner was provided by the Woman's Auxiliary of the Church, Mrs. C. M. Bowen and Miss Pansy Webb being in charge. The society wishes to thank the above hostesses and their aids for this splendid dinner course.

The following physicians, their wives and guests were present:

Dr. and Mrs. Owen Pigman, Dr. and Mrs. B. C. Bach, Dr. and Mrs. J. E. Crawford, Dr. and Mrs. P. E. Sloan, Whitesburg; Dr. and Mrs. E. F. Shepard, Jenkins; Dr. and Mrs. T. M. Perry, Burdine; Dr. J. E. Johnson, Jenkins; Dr. A. L. Sparks, Jenkins; Dr. H. R. Staggs, Fleming; Dr. G. W. Thornsby, Fleming; Dr. and Mrs. A. H. Bond, Seco; Dr. and Mrs. O. F. Kleckner, McRoberts; Dr. Carl Pigman, Mr. and Mrs. Herman Hale, Mr. John M. Yost, Cashier, Whitesburg; Miss Richie Maker, Mr. Frank Scott, Pikeville; Miss Dorothy Pendergrass, Jenkins; Mr. Walter H. Sebastian, Ashland; Dr. and Mrs. R. D. Collins, Whitesburg.

A very good meeting was held; the chief speaker was Mr. Yost, Pikeville, with piano solos by Mr. Sebastian. These men certainly did entertain the audience by their songs and talks. Dr. Pigman, presiding officer made a short farewell talk, as retiring president of the society.

The following officers were elected for the year 1939: President, Aubrey L. Sparks, Jenkins; Vice-President, R. D. Collins, Whitesburg; Secretary-Treasurer, J. E. Johnson, Jenkins.

Adjournment.

R. DOW COLLINS, Retiring Secretary.

Pike: The Pike County Medical Society held its last meeting in 1938 on December 15 at the Ky. & W. Va. Power Company Building, for the purpose of reorganization.

F. H. Hodges presided over the meeting and J. C. Wheeler was elected president; M. D. Flanary, Vice-President, and H. K. Bailey, Secretary for the ensuing year of 1939.

At the meeting, it was decided that the County Society should meet each third Monday of the month at 8 P. M.

H. K. BAILEY, Secretary.

Carter: At the annual meeting of the Carter County Medical Society, the following officers were elected: President, Smithfield Keffer; W. H. Wheeler, Vice-President; Don E. Wilder, Secretary-Treasurer.

DON E. WILDER, Secretary.

Jackson: On January 4th, 1939 at 2 p. m. the practicing doctors of Jackson County met at the office of H. A. Hughes in McKee with the purpose of forming a County Medical Society.

Those present at meeting were: J. E. Anderson, Ray Bohl, H. A. Hughes, and Thomas L. Boneta.

At this meeting Drs. J. Anderson, H. A. Hughes, and Thomas L. Boneta were appointed President, Vice-President, and Treasurer-Secretary respectively.

It was agreed at this meeting that Drs. Thos. L. Boneta, H. A. Hughes, and J. Anderson be recommended for appointment to the future Jackson County Board of Health.

THOMAS L. BONETA, Secretary.

Knox: The Knox County Medical Society met Thursday night, January 12, 1939 at 7 p. m.

The following members were present: Drs. J. G. Tye, Leslie Logan, T. R. Davies, R. B. Fulks, W. Parker Clifton, J. E. Parker, and George Corum.

It being the first meeting of the year officers were elected for year 1939: President, T. R. Davies, Barbourville; Vice-President, B. P. Jones, Barbourville; Secretary and Treasurer, W. Parker Clifton, Barbourville; Delegate, J. G. Tye, Barbourville.

There was a rather lengthy discussion on various plans of hospitalization.

W. PARKER CLIFTON, Secretary.

Boyd: The annual meeting for election of officers of the Boyd County Medical Society was held December 6, 1938 in the Ballroom of the Henry Clay Hotel. Officers elected were as follows: President, C. B. Daniels, Ashland; Vice-President, J. R. Cooper, Ashland; Secretary, Hubert J. Pritchard, Catlettsburg; Treasurer, H. S. Swope, Ashland. Proctor Sparks, who was chairman of the entertainment committee, provided a very interesting and entertaining program of classical musical numbers. The meeting was well attended with practically every member of the society present and all had an enjoyable evening.

C. B. DANIELS, Secretary.

Bracken-Pendleton: Death removed from our midst, in October, 1938, at the age of ninety years, one of our oldest and best known physicians, Dr. T. C. Nichols, a pioneer in country practice. For sixty-five years he practiced his profession. In his early years he rode on horseback over mud roads as a family physician to attend the sick. He served faithfully and well in an unselfish manner as only one who loves his profession can do. He won and retained

the love and respect of all citizens of his community and his neighbor physicians who regard his death with profound regret.

Therefore, Be It Resolved, That in his passing, the community, the medical profession and the Bracken-Pendleton Medical Society of which he was an honorary member deeply mourn his loss.

That the Bracken-Pendleton Medical Society extends its sincere sympathy to the bereaved family.

That a copy of these resolutions be sent to the local paper, to the Journal and to the family of the deceased.

Committee: O. W. BROWN, Falmouth
C. K. WALLIN, Brooksville
Wm. A. McKINNEY, Falmouth.

Barren: At the annual meeting of the Barren County Medical Society, the following were elected as officers of the society: President, Clifton G. Follis; E. L. Palmore, Vice-President, and Rex Hayes, Secretary and Treasurer.

REX HAYES, Secretary.

NEWS ITEMS

Dr. Samuel Baker, noted Psychiatrist of the Government Hospital, Chillicothe, Ohio, will assume the position at the United States Veterans Hospital, Lexington, formerly held by Dr. Floyd K. Foley, who resigned to become superintendent of the Eastern State Hospital. Dr. A. M. Lyons, Louisa, formerly health officer of Lawrence County, has been appointed, director, of the Feeble-Minded Institute, Frankfort.

Dr. Hubert Meredith, Scottsville, was elected President of the Third District Medical Society at the quarterly meeting at Bowling Green. The other officers elected were E. W. Stone, Bowling Green, Vice-President; J. T. Gilbert, Bowling Green, Secretary-Treasurer.

Dr. W. Barnett Owen, Louisville, has fully recuperated from his recent illness and has returned from a vacation in Florida.

Dr. Silas O. Witherbee, 93, a practicing physician in Jefferson County for half a century died in Middletown Tuesday, January 3. He was a graduate of Columbia University and was in active practice within a few years before his death.

Dr. W. C. Hobdy formerly of Franklin, died in San Francisco. Dr. Hobdy was graduated from Columbia University and took his internship at the Patterson General Hospital, Patterson, New Jersey, and was junior physician while Dr. A. T. McCormack was senior physician in that institution.

ART TELLS HISTORY OF AMERICAN MEDICINE



"Beaumont and St. Martin"

"Beaumont and St. Martin" is the first of six large paintings in oil memorializing Pioneers of American Medicine" which artist Dean Cornwell will complete in the next few years. Others in the series are: Dr. Oliver Wendell Holmes, Dr. Ephraim McDowell, Dr. Crawford W. Long, Dr. William T. G. Morton, and Major Walter Reed, and one woman, Dorothea Lynde Dix, who, while not a physician, stimulated physicians to study insanity and feeble-mindedness.

Arrangements to supply physicians with free, full color reproductions of "Beaumont and St. Martin" without advertising, and suitable for framing, have been made with the owners, John Wyeth and Brother, 1118 Washington Street, Philadelphia.

The Louisville Mental Hygiene Clinic, affiliated with the Department of Psychiatry in the University of Louisville and the Department of Pediatrics, had for their guest speaker Dr. Leo Kanner, Associate Professor of Psychiatry, Johns Hopkins University, at their annual meeting Wednesday, January 18th, in the amphitheatre of the Louisville City Hospital. Dr. Kanner spoke on Mental Hygiene of Children. He is one of the outstanding men in this field in the country.

This meeting was very instructive and well attended.

Dr. Irvin H. Sonne, Louisville, has been appointed junior physician at the Central State Hospital. Two junior physicians recently have resigned at the Hospital, Dr. J. A. Sleet because of ill-health and Dr. Ethel Hieronymous, who is leaving the state.

The Kentucky Psychiatric Association held its annual meeting in Lexington, Kentucky, December 9 and 10, 1938. It was a very successful meeting and demonstrated the strides in the progress of Psychiatry made in Kentucky during the last year. The following officers were elected: Spafford Ackerly, Louisville, President; F. K. Foley, Lexington, President-Elect; L. M. Rogers, Lexington, Vice-President, and Robert H. Felix, Lexington, Secretary-Treasurer.

Two members of the Council are as follows: John R. Peters, Pewee Valley, and S. D. Vestermark, Lexington.

The other two members of the Council are: W. E. Gardner, Louisville, and L. E. Trent, Lexington.

The Pattie A. Clay Infirmary at Richmond, Kentucky, through a grant of the P. W. A. will soon have a \$150,000 addition to this splendid infirmary. The hospital was founded under a provision of the deed of the late Brutus J. Clay, and will now become a general county hospital.

Dr. J. F. Wright, of Russell, Kentucky entertained with an elaborate dinner all the physicians of his county and had among his guests the distinguished Congressman Joe B. Bates, also Mr. Fred N. Vinson, Judge of the Court of Appeals, District of Columbia.

Dr. W. R. Thompson of Washington County, died in December.

The fifth annual meeting of the Mississippi Valley Medical Society will be held in the new Municipal Auditorium at Burlington, Iowa, September 27, 28, 29, 1939. The magnificent new Auditorium at Burlington, only two blocks from the headquarters hotel, will afford the Society the largest and finest meeting place it has ever had. A wonderful Exhibit Hall is being planned which will afford both technical and scientific exhibitors, the largest floor space in the history of the Society.

A cash prize of \$100, a gold medal and a certificate of award will be offered for the best unpublished essay on a subject of interest and practical value to the general practitioner of medicine. Entrants must be members of the A. M. A.

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☐ Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245

☐ Laryngoscope, 1935, XLV, 149-154

☐ N. Y. State Jour. Med., 1935, 35-No. 11, 590

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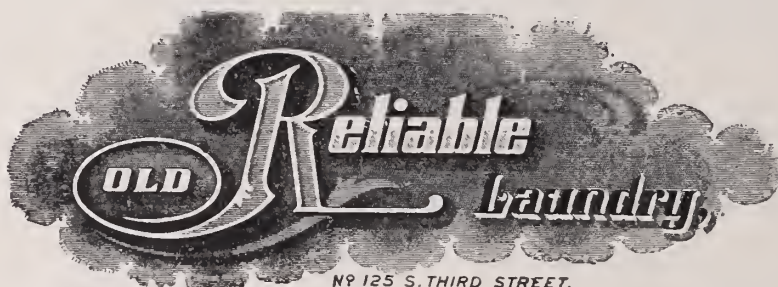
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MARCH, 1939

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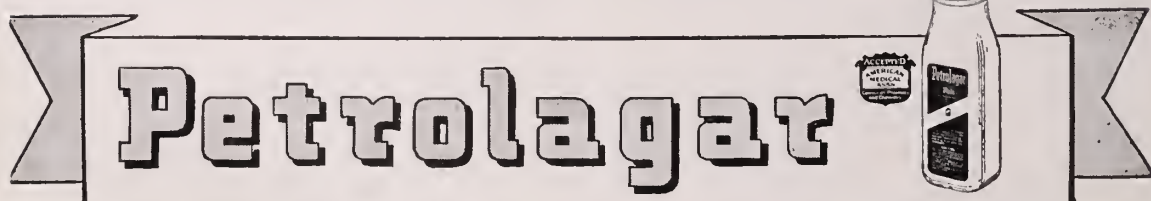
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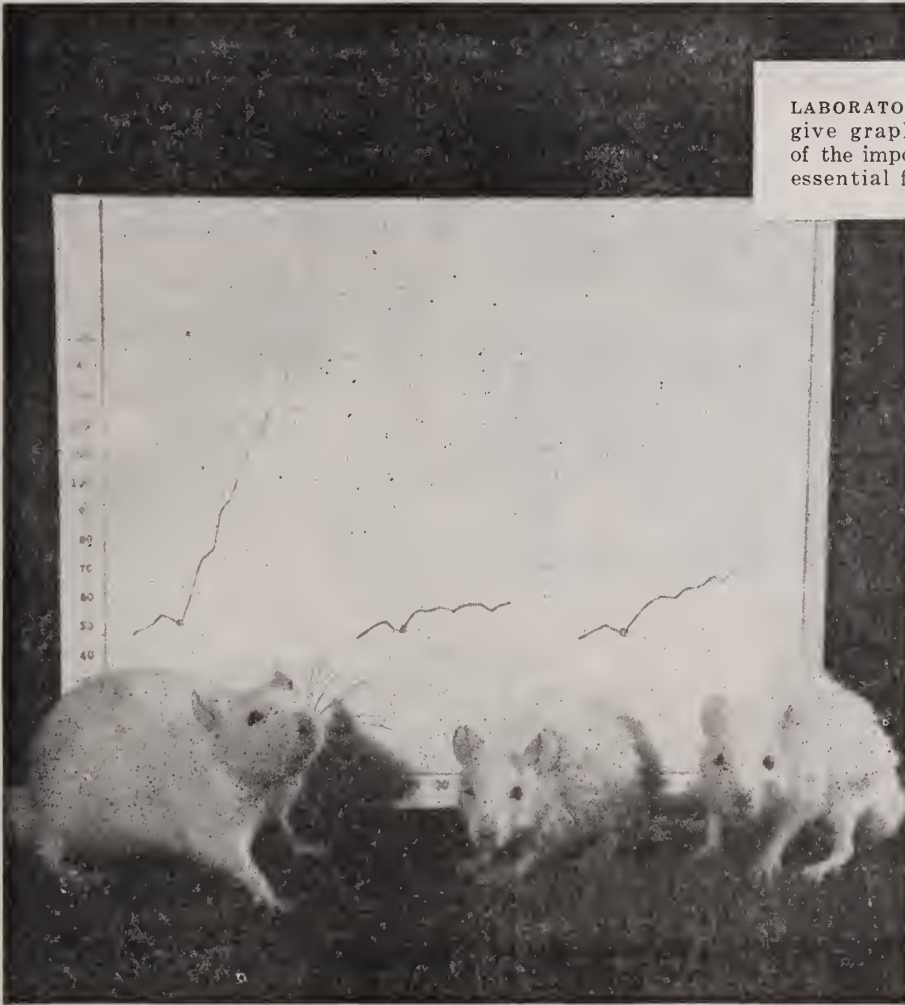


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1. PINESS, G., MILLER, H. AND ALLES, G. A.—Clinical Observations on Phenylaminoethanol Sulphate, *J. A. M. A.*, 94:790, 1930.
2. BERTOLET, J. A.—Benzyl Methyl Carbinamine Carbonate, *Med. J. and Rec.*, 136:75, 1932.
3. BYRNE, H. V.—The Use of Benzyl-Methyl-Carbinamine-Carbonate in the Treatment of Rhinitis, *New Eng. J. Med.*, 209:1048, 1933.
4. SCARANO, J. A.—Rapidity of Shrinkage and Immediate and Secondary Reactions Following Local Applications of Ephedrine and Benzedrine, *Med. Rec.*, 140:602, 1934.
5. WOOD, E. L.—A New Drug for Treatment of the Eustachian Tube and Middle Ear, With an Apparatus for Its Use, *Arch. Otolaryng.*, 21:588, 1935.
6. GIORDANO, A. A. S.—Benzyl Methyl Carbinamine (Benzedrine), *Penna. Med. J.*, 39:20, 1935.
7. SULMAN, D.—Certain Conditions in Which a Volatile Vasoconstrictor Has Proved of Particular Value, *Med. Times*, 63:374, 1935.
8. SCARANO, J. A.—The Gross Changes Produced in the Nose by Benzedrine Inhalation, *Med. Rec.*, 143:161, 1936.
9. SCARANO, J. A. AND COPPOLINO, J. F.—The Use of Benzedrine Vapor in Children, *Arch. Ped.*, 54:97, 1937.
10. BERTOLET, J. A.—Benzedrine in Paranasal Sinusitis, *Clin. Med. and Surg.*, 44:25, 1937.
11. VOLLMER, E. S.—Use of the Benzedrine Inhaler for Children, *Arch. Otolaryng.*, 26:91, 1937.

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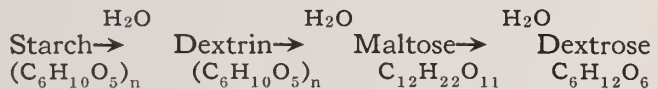
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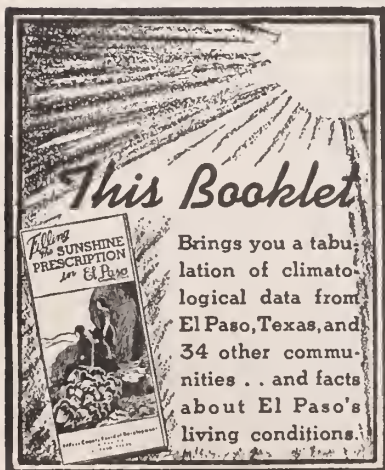
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(4) 1928. Science. 67, 249.

(5)a. 1935. Nature. 135, 652.

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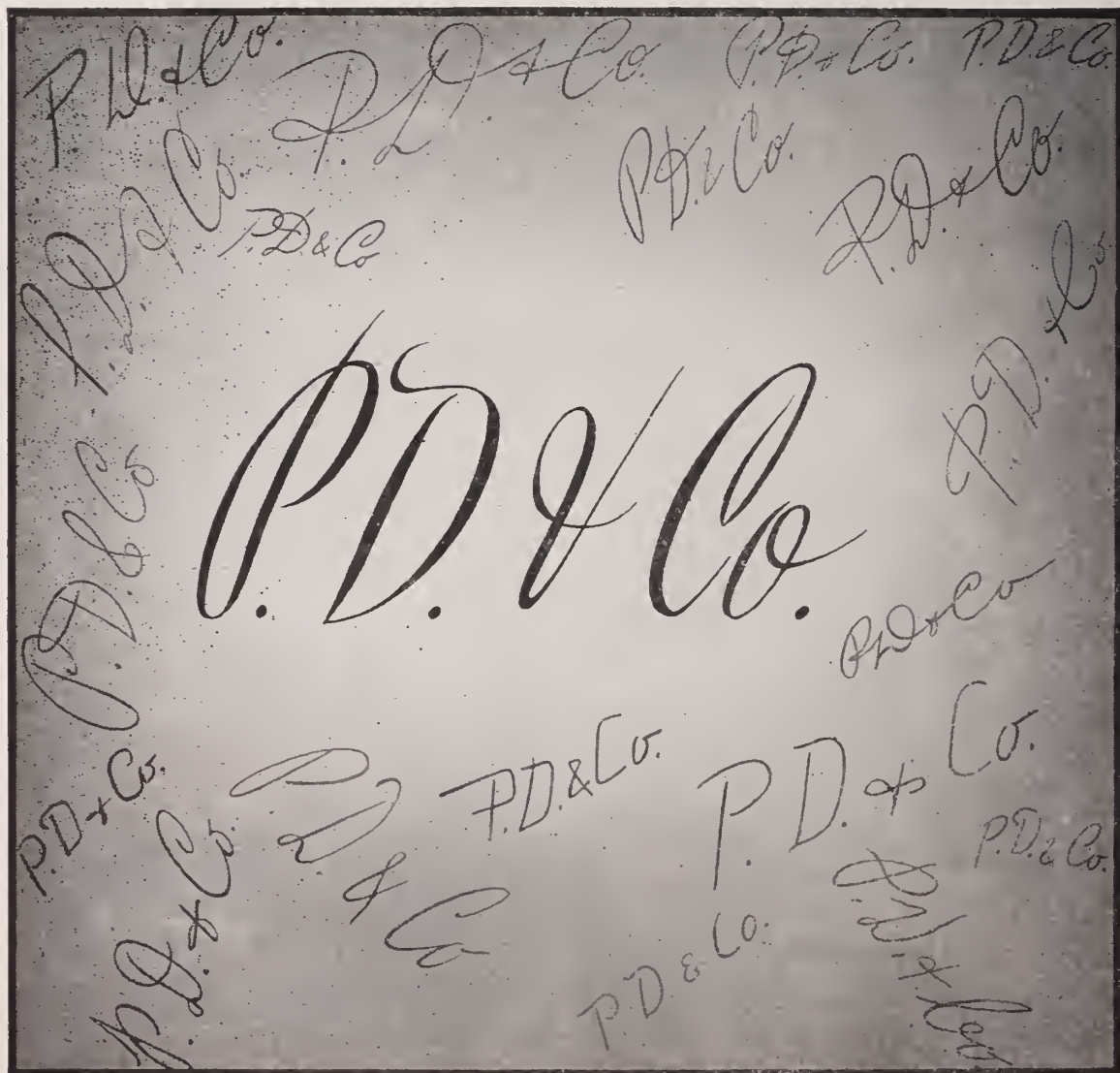
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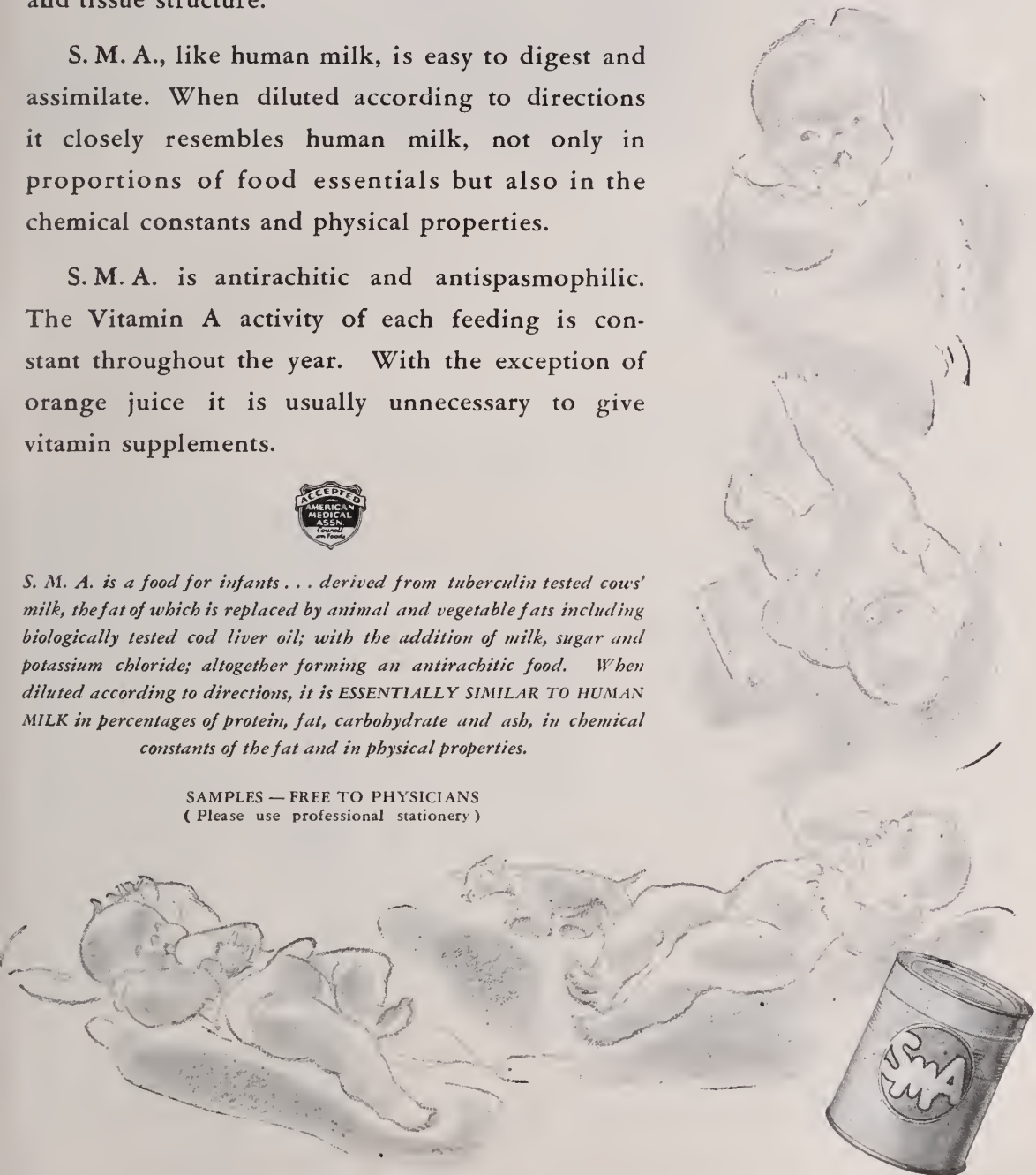
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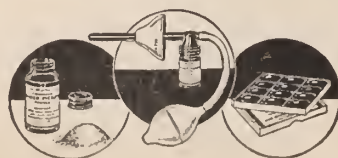
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Allen	A. O. Miller	Scottsville	March 22
Anderson	J. B. Lyen	Lawrenceburg	March 6
Ballard	F. H. Russell	Wickliffe	March 14
Barren	Rex Hays	Glasgow	March 15
Bath	H. S. Gilmore	Owingsville	March 13
Bell	E. S. Wilson	Pineville	March 10
Boone	R. E. Ryle	Walton	March 15
Bourbon	Eugene L. D. Blake	Paris	March 16
Boyd	Hubert J. Pritchard	Catlettsburg	March 7
Boyle	P. O. Sanders	Danville	March 21
Bracken-Pendleton	W. A. McKenney	Falmouth	March 23
Brathitt			March 21
Breckenridge	J. E. Kincheloe	Hardinsburg	March 9
Bullitt	G. F. Brockman	Shepherdsville	
Butler	G. E. Embry	Morgantown	March 1
Caldwell	W. L. Cash	Princeton	March 7
Calloway	Hugh L. Houston	Murray	March 2
Campbell-Kenton	Joseph H. Humpert	Covington	March 2 & 16
Carlisle	E. E. Smith	Bardwell	March 7
Carroll	J. M. Ryan	Carrollton	
Carter	Don E. Wilder	Grayson	March 14
Casey	William J. Sweeney	Liberty	March 23
Christian	Fred T. Harned	Hopkinsville	March 21
Clark	R. E. Strode	Winchester	March 17
Clay	J. L. Anderson	Manchester	
Clinton	S. F. Stephenson	Albany	March 18
Crittenden	C. G. Moreland	Marion	March 13
Cumberland	W. F. Owsley	Burkesville	March 1
Daviess	Lee Tyler	Owensboro	March 14 & 28
Elliott			
Estill	Virginia Wallace	Irvine	March 8
Fayette	John Harvey	Lexington	March 14
Fleming	Roy Orsburn	Flemingsburg	March 8
Floyd	J. G. Archer	Prestonsburg	March 29
Franklin	Grace R. Snyder	Frankfort	March 2
Fulton	Russell Rudd	Fulton	March 8
Gallatin	J. M. Stallard	Sparta	March 16
Garrard	J. E. Edwards	Lancaster	March 16
Grant	Paul E. Harper	Dry Ridge	March 15
Graves	H. H. Hunt	Mayfield	March 7
Grayson			
Green	S. J. Simmons	Greensburg	March 6
Greenup	R. L. Compton	Greenup	March 10
Hancock	F. M. Griffin	Hawesville	March 6
Hardin	D. E. McClure	Elizabethtown	March 9
Harlan	C. M. Blanton	Harlan	March 18
Harrison	W. B. Moore	Cynthiana	March 6
Hart	S. F. Richardson	Munfordville	March 7
Henderson	J. Leland Tanner	Henderson	March 13 & 27
Henry	Owen Carroll	New Castle	March 2
Hickman	Layson B. Swann	Clinton	March 2
Hopkins	David L. Salmen	Madisonville	March 2
Jackson	Thomas L. Boneta	McKee	March 4
Jefferson	W. B. Troutman	Louisville	March 6 & 20
Jessamine	J. A. VanArsdall	Nicholasville	March 23
Johnson	P. B. Hall	Paintsville	March 11
Knott	M. F. Kelley	Hindman	March 25
Knox	W. Parker Clifton	Barbourville	March 24
Larue			
Laurel	Oscar D. Brock	London	March 8
Lawrence	L. S. Hayes	Louisa	March 20
Lee	W. D. McCollum	Beattyville	March 11
Leslie			
Letcher	J. E. Johnson	Jenkins	March 28
Lewis	O. P. Pennington	Vanceburg	March 20
Lincoln	Lewis J. Jones	Hustonsville	March 17
Livingston	J. E. Dunn	Smithland	
Logan	Walter Byrne	Russellville	March 1
Lyon	H. H. Woodson	Eddyville	March 7
McCracken	Leon Higdon	Faducah	March 22
McCreary	R. M. Smith	Stearns	March 6
McLean			March 9
Madison	H. C. Blanton	Richmond	March 16
Marion	W. E. Oldham	Lebanon	March 28
Marshall	S. L. Henson	Benton	March 15
Mason	C. W. Christine, Acting Secretary	Maysville	March 8

COUNTY	SECRETARY	RESIDENCE	DATE
Meade	S. H. Stith	Brandenburg	March 23
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	March 14
Metcalfe	E. S. Dunham	Edmonton	March 7
Monroe	George E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mount Sterling	March 14
Morgan	Wallace Brvd	West Liberty	
Muhlenberg	E. L. Gates	Greenville	March 14
Nelson	R. H. Greenwell	Bardstown	March 15
Nicholas	T. P. Scott	Carlisle	March 20
Ohio	Oscar Allen	McHenry	March 1
Oldham			March 7
Owen	K. S. McBee	Owenton	March 2
Owsley	John R. Aker	Booneville	March 6
Perry	D. D. Turner	Hazard	March 13
Pike	H. K. Bailey	Pikeville	March 20
Powell	I. W. Johnson	Stanton	March 6
Fulaski	M. C. Spradlin	Somerset	March 9
Robertson			
Rockcastle	Lee Chestnut	Mount Vernon	March 3
Rowan	A. W. Adkins	Morehead	March 13
Russell	J. R. Popplewell	Jamestown	March 13
Scott	Carl M. Gambill	Georgetown	March 2
Shelby	A. D. Doak	Shelbyville	March 16
Simpson	N. C. Witt	Franklin	March 13
Spencer			
Taylor	M. M. Hall	Campbellsville	March 9
Todd	B. E. Boone, Jr.	Elkton	March 1
Prigg	H. L. Wallace	Cadiz	March 29
Trimble			
Union	D. O. Donan	Morganfield	March 29
Warren-Edmonson	Hal Neel	Bowling Green	March 8
Washington	J. H. Hopper	Willisburg	March 15
Wayne	Frank L. Duncan	Monticello	
Webster	O. M. Smith	Dixon	March 31
Whitley	O. A. Moss	Williamsburg	March 2
Wolfe	G. M. Center	Campton	March 6
Woodford	George H. Gregory	Versailles	March 2

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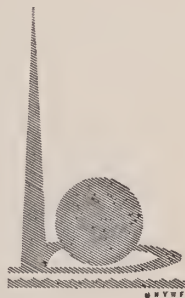
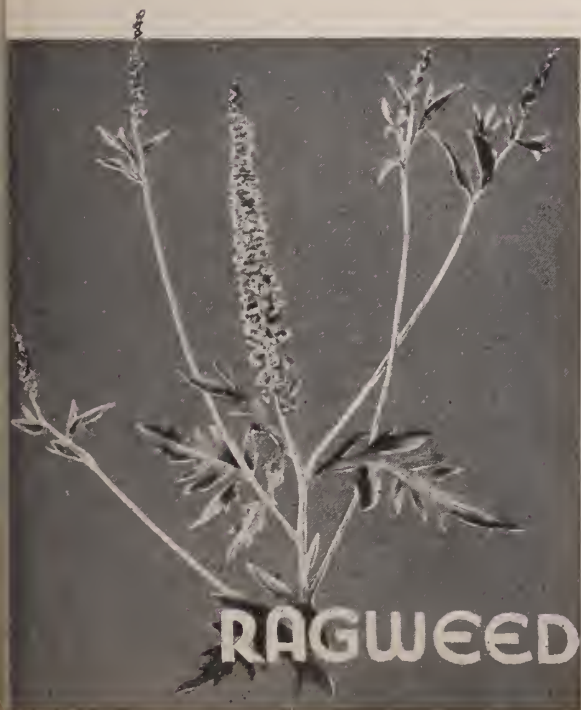
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THE PROBLEM OF CHRONIC DISEASE*

AUSTIN BELL, M. D.

Hopkinsville.

The subject here discussed was assigned by the program chairman on the suggestion of the Third District Councilor. Discipline in Army or Naval circles is essential for a properly functioning organization, and co-operation in professional ranks determines the character of service rendered by organized medicine.

On first thought the hopelessness of my task was evident, and further consideration accentuated the broadness of its scope and the difficulty in wisely touching many diseases essential in such an effort. However, as the onus of the endeavor falls on the sturdy frame and broad shoulders of Dr. Turner, your mercy and leniency are urged for his unwise assignment. Realizing that little new or unusual will be presented, it is my earnest desire to review certain phases of chronic diseases, which may stress the importance of their relationship to incapacity, and render those afflicted a fruitful source of financial responsibility and a heavy burden on every community.

Many questions arise for solution and certain salient features present themselves.

What is the present status of these diseases?

As a profession, are we diligently seeking facts as to invalidism and fatalities caused by each?

What are the essential and predisposing causes?

Are preventive measures utilized to reduce their incidence, recognizing as we should, the wisdom of prophylaxis rather than cure?

Unquestionably, great progress and marked success have followed the truly scientific efforts of diligent workers in these lines, but satisfaction with results attained leads to inactivity and retards further progress in fertile fields. Have we become less active?

Tuberculosis, a disease so prevalent and fatal, accounted for more deaths than any other pestilence a few years ago, claiming as

its toll one out of every seven who died from all causes; today, through trained effort and judicious handling is reduced to seventh place in necropsy tables. Only one state presents a higher death rate than Kentucky, and it is the leading cause of all deaths in the State between the ages of ten and fifty.

In 1935, there were 2013 deaths; in 1936—2065 which increase was attributed to exposure incident to floods in different sections of the State. In 1937, additional deaths resulted and major flood conditions prevailed. It remains for 1938 to furnish statistics confirming accuracy of such conclusions. Are we resting on our oars and marking time, conscious of past performances and a lessened death rate?

Early diagnosis, a carefully planned regime of rest, balanced and abundant diet, fresh air, sunshine with pleasant surroundings and collapse therapy have wrought marvelous changes and lead to "arrest" in many cases. Our mortality tables are mute reminders of the necessity for continuing these helpful measures. Further intensive effort along the same lines, which must be educational in professional and lay circles, will continue mortality reduction. Efforts to thoroughly instruct all the people in these essentials should be our goal—nor should we forget the role that surgery occupies in present day accomplishments and the hope it holds forth in the future. Time spent in certain sanatoria has been reduced from twenty-six months to ninety-one days because of advanced surgical methods.

Youthful minds quickly grasp the essentials of success and business cares do not divert them from the importance of the task. Frequent association with those who have a chronic cough over a long period of time without evident spread of infection, makes callous individuals so exposed, and the constant demands of a busy life lessens attention to the dangers in adult circles. Tactful and trained health officers should devote much of their time to a discussion of this subject before the student bodies of high schools, colleges and parent-teachers associations, and groups of men and women in the various clubs should be acquainted with results to be attained and impressed with the necessity for renewed precautions. The outstanding task

*Read before the Kentucky State Medical Association, Louisville, October 3-6, 1938.

of the health officer should be educational rather than assuming those functions rightfully in the province of the practitioner of medicine. Fewer criticisms of health boards and more hearty co-operation from the profession would be given under such circumstances. In our scheme of service, the desire should be to render the highest type of medical supervision to all and surely the instruction and guidance of the sanitarian in his legitimate field makes for efficiency and equips for emergencies. At such times the doctors respond to duty's call and willingly yield to public need and are unsparing in effort and untiring in devotion, as amply evidenced by their response in recent flood disasters and when world conditions required mobilization of troops with adequate medical personnel.

A united effort to report all tubercular patients, examine all suspects, investigate all contacts, educate the unfortunates and those exposed, and when possible, hospitalize active cases, offers invaluable aid in further progress in white plague management. The wisdom of sanatorium treatment in every active case is unquestioned. Results prove that "arrests" are secured in every climate and the disasters frequently following a return home after apparent cure under supposed favorable climatic conditions, stresses the wisdom of local sanatoria available to all. The inadequate sanatoria provision for indigent tubercular patients in Kentucky and the heavy financial outlay required in those privately owned, limit the number of patients who may profit by the enhanced chances of cure thus afforded.

Surely National, State, County and City governments should make possible that charity and part charity patients have the blessings of institutional training. Individuals, financially independent, are receiving the highest type medical institutional supervision in every portion of this great nation, and physicians in their daily contacts should unhesitatingly stress the great benefits gained and support fiscal measures that make ample universal provision for those less fortunate. Such surroundings are conducive to adoption of measures essential in restoration of health. The happy response to treatment observed there, gives a new outlook on life and stimulates a favorable mental state and renewed effort for cure, so essential for best results. The measures most potent in protecting others are taught and greater protection for those contacted from day to day follows.

Active tuberculosis often exists for years in a family and the subject is studiously avoided. The same individual after institu-

tional treatment, willingly discusses his or her condition and eagerly relates circumstances that occur. The acceptance of the misfortune and its frank discussion, attests the changed mental attitude resulting from such care. Economic conditions frequently occasion the occupancy of many homes by the tenant class, and each change may result in new exposures and fresh foci. Hovels, impossible to render safely inhabitable, frequently furnish shelter for many families each year, and those most prolific, move with least provocation and precautions. The knowledge that tuberculosis is usually acquired in early life and is not inherited, stresses the wisdom of slum clearance, and renders imperative constant surveillance of all infected houses and protection of the baby born to such parents.

Who can question the wisdom of trained supervision of conditions existing in all tubercular homes and the necessity for capable sanitarians to protect future occupants of such houses? Many are guided by intelligent and unselfish physicians but with the indigent and irresponsible it is a public duty.

As a group, we must demand our rights and protect our professional ideals, which have developed in our Nation the best trained and most capable practitioners of medicine found in any country. At the same time, we must not be unmindful of that great army of individuals, who require the services and guidance of the public officials in obtaining best results in the home and with others whose lives are touched. The acceptance by organized medicine of responsibility to the public in advocating supervision, which has as its objective the dissemination of knowledge prophylactic in nature, discourages the advent of socialized medicine. A failure to sense this need is resulting in the laity sponsoring measures which will change the relationship which seems wisest for profession and public. As the logical protectors of the health of our nation, duty demands constructive measures to fulfill our responsibilities, and amply safeguard all the people, under organized professional leadership. A failure on our part encourages scheming politicians, and makes possible their determination of the future health policies of the State and Nation. Recall visiting a Negro man with advanced pulmonary tuberculosis in four different homes in one year, several years ago. Each move was made without sanitary supervision of the vacated houses. Who can estimate the economic loss resulting from these exposures or the number of active cases following? An adequate health service should chart all known active cases, and have super-

vision of the sanitation of all houses occupied and especial attention should be given to the vacated homes. Hearty co-operation of the medical profession in these efforts will be given only to the health officer who devotes all his time to such duties and is not a competitor in the curative field.

The value of the tuberculin test in childhood and the help of X-ray in determining the location and extent of involvement, are most helpful measures. There are cases of pulmonary tuberculosis impossible to diagnose without these valuable aids. The necessity of long continued treatment in establishing "arrest," justifies the utilization of every means to thoroughly convince the patient, family and friends in the correctness of the findings, constantly realizing that chances of cure are largely dependent on early recognition, rational co-operation, long continued rest and persistency in every restorative measure.

The insidiousness of this disease, its protean manifestations, the seriousness of its consequences to those infected and exposed, the long continued latency and later activity when debilitated by certain predisposing diseases, the enemy of childhood—all place this disease in a class which makes imperative every diagnostic aid, the most exacting routine and the closest co-operation between practitioner and health officer, to further reduce its incapacitating and lethal results.

Cardio-vascular diseases have forged ahead in our nation as the outstanding cause of death, (350,000 is the annual toll). Whether the recorded increase accurately portrays the picture is doubted. Many deaths are known to come from this system which in the past were placed elsewhere. The frequent diagnosis of acute indigestion which proved fatal, doubtless should have been attributed to cardiac accident. Statistics prove unmistakably the terrible toll taken yearly in deaths from heart disease and it behooves the medical profession, as guardians of the nation's health, to put forth every effort in combating this alarming increase. Medical and Surgical ranks are depleted annually, in large numbers, as evidenced by the necropsy lists found each week in our official journals. A careful inventory should be taken of our mode of life from every angle, commencing with the pregnant patient and utilizing every measure which adds to her well being whether physical, mental or moral—conscious of the results that may ensue with her unborn child, when her days of travail are completed and a new offensive is launched in the battle of life, unless a halt is called on this increase. We should surround this child with everything that offers vigor of

body and mind, and safeguard him or her from the many preventable diseases. Removal of foci of infection and the prevention and treatment of serious complications in the course of disease, are things to be sought. The proper training of adolescents as to moderation in all things, with especial emphasis on alcohol and tobacco, are in line of prevention. Counsel as to stress and strain of modern life, and the helpfulness of a hobby with an occasional vacation for the business man. A balanced, well regulated diet, eaten slowly and regularly, are points worthy of emphasis. Routine physical examination yearly offers opportunity for early diagnosis of chronic disease, often correctible at such a stage, and enables examinee to readjust his or her life. A high degree of optimism is required by the physician to secure maximum co-operation from the public and the patient. Even then, many chronic cardio-vascular conditions will ensue and we must accept our obligation in lessening the burden and helping those unfortunate, in best meeting indications, when facing such incurable disease.

Dr. Harlow Brooks of New York (Bellevue Hospital), in an address said, "In the light of optimism, for although we are as yet entirely unable to cure many cardiac conditions, we have certainly learned very well how to make many of its victims not only comparatively comfortable but also reasonably efficient, and though we may not cure many diseases of this character, no more than we cure the often closely allied disease of birth-days, still life and comfort, which we are now able to continue for long periods of time, are after all, all that we can accomplish in any condition, cardiac or otherwise." Still quoting, "No longer does the profession feel that the diagnosis of cardiac disease is a part of a death sentence and our patient, the layman, has also been taught to look upon the general classification with less horror and more optimism—perhaps with more resignation—because of the things we may do for him and because of the courage we may rightfully instill into him." He spoke not as a cardiologist but as an internist and our message to this same group from every branch of the medical profession should strike this same optimistic note. Whether or not the Thebesian vessels are capable of acquiring the nutritional function of supplying a cardiac infarct with necessary blood is doubted by many, yet the very response which comes in certain cases of coronary occlusion, apparently hopeless, attests the wisdom of nature in automatically providing a successful means of remedying a seemingly hopeless condition. The frequency with which

scars of ancient cardiac infarcts are found at autopsy, warrants the hope that a recognized accident of such a nature, does not necessarily mean approaching death. Nor is the prognostication of a five year limit of life warranted. Surely medical literature is replete with authoritative case histories where life lasted many years after such development.

Dr. Paul D. White of Boston in *Journal A. M. A.*—discussed longevity of coronary occlusion victims and relates a number of cases in his own and consultation work, that have lived from one to twenty years, many of whom have lead active lives after such development, and makes the following comment relative to one patient i. e. "Here is a case which may serve not only to demonstrate the wonderful recuperative power of a seriously injured heart muscle but also to put hope in the breast of many victims of coronary thrombosis who having recovered from their acute attacks, still live in dread, waiting for the sword of Damocles to fall in the form of a second and fatal attack." And summarizing his article as follows: (quoting) "I present herewith, to illustrate the longevity and physical activity possible after Acute Coronary Occlusion, the case of a man who died of apoplexy at the age of eighty and showed at autopsy a firm scar in the heart muscle, resulting from the healing of the infarct which occurred seventeen and one half years before. The heart was otherwise in good condition anatomically, and so sound functionally that ten years after the heart attack, the patient was able to climb a mountain at a fast pace without symptoms, at the age of seventy-three." "Hope springs eternal in the human breast," and justly so! Surely we are justified in telling our cardio-vascular patients that the future is dependent largely on their willingness to face facts and readjust lives on rational grounds. A determination of the heart's capacity and the willingness to accept a scale of physical and mental activity based on that Survey, bearing in mind the danger of overtaxing a substandard muscle, affords a good chance of years of useful service to many. A good psychologist must judge the individual patient, and it is indeed a wise practitioner who knows how much emphasis to place on pathology present. Some patients demand candor and profit by such an attitude. Others could not face the future wisely or hopefully, if aware of true conditions. Only recently some eminent cardiologist was asked how much to tell a cardiac seriously ill and he answered, "as little as possible."

Rarely are we justified in removing every

vestige of hope, realizing as we should our own fallibility, and nature's response is not an open book that we may read. We should endeavor to evaluate those things frequently found in this type case and the value of mental and physical rest should be stressed. Especially should the chronically diseased heart be protected in acute illness and ample time given for safe and satisfactory convalescence. Many helpful suggestions should emanate from the health officer in his informative lay discussions. Such talks should stress that rheumatism in childhood, as indicated by "growing pains," may involve the heart valves and result seriously years afterward. Importance of certain sequelae of childhood diseases likewise should be emphasized.

Syphilis is more intensively studied and wisely treated than ever in the past. It remains to be proven that removing the traditional bans of disgrace to its victims and facing prophylactic measures and therapeutic indications publicly, will pave the way for future control. Regulations existing in foreign countries which are reputedly responsible for its low incidence there, may work in the United States, but we must beware of the Spectre ever present of socialized medicine and limit carefully the scope wisest to include in such an undertaking. Our zeal to prevent syphilis and eliminate its disabling and lethal results, should make us recognize the value of educating the public and in this, the health officer should put forth his best efforts, but he should not enter the curative field, though ample provision should be made for the indigent. Certainly his talks should stress the ease of clearing open lesions but the seriousness of accepting this as cure. Long continued treatment and laboratory tests are essentials of safety requiring his emphasis.

Many people have been made syphilophobics by reason of such diagnosis without positive proof. Today, with microscopic aid in the initial stage, the Wassermann and Kahn tests for more advanced lesions and the striking characteristics of history and secondary symptoms, the diagnosis should be unmistakable in most instances. The wisdom of early diagnosis and intensive specific treatment cannot be too greatly stressed, but the condemnation of the doctor who begins treatment when still uncertain should carry a heavy penalty. Too frequently is the history elicited of such a diagnosis and a short course of intensive treatment when the patient questions its accuracy and becomes negligent. Surely every determining factor should be stressed to the patient that he or she may realize the value of long continued

treatment. The thought has often arisen—were I the victim—that active therapy would be used twice each year for a six week period, and probably for life. This of course would be preceded by two to two and one half years of intensive treatment.

The parasyphilitic diseases might be prevented by such persistency and much incapacity saved. Our mental hospitals are filled to overflowing and the true status of syphilis in a causative relationship is not sufficiently emphasized. Accurate early diagnosis, with intensive and persistent treatment with the time honored remedies, together with the use of the newer drugs which so quickly clear active evidences of disease, surely offer the probability of cure. The laboratory aid is invaluable in determining results attained. We must not rest the case with apparent cure—and give a clear bill of health. Rather frankly state a negative blood test today, may in the course of time, again become positive, and require further zeal in eradication. The seriousness of central nerve lesions makes imperative a spinal puncture to exclude a positive spinal fluid before the patient is dismissed from supervision. Unfortunately, so many of its victims in the fullness of time, become careless and cease to consider necessary continued treatment. The health officer should constantly remind groups in his prophylactic discussions, of the necessity of long continued treatment and semi-annual blood tests for best results. Routine tests in pregnancy are indicated in every case when first consulted, and specific treatment offers results in proportion to the persistency. The late discovery of infection makes intra-venous medication mandatory. The protective value to the child of a few doses of arsenicals intra-venously during the latter months of pregnancy, cannot be overestimated and gives astonishing results.

The cancer problem as a National menace is discussed fully in medical and lay literature and with a death toll of 150,000 annually, and the assumption of second place in mortality tables, surely deserves the intensive study and mature consideration of its every phase by the master minds. The increased span of life furnishes more victims from this disease, and the decade between fifty and sixty is facing its greatest death rate. Increased chances of complete cure with early recognition, again stresses the importance of universal and careful physical examination annually at the hands of a competent examiner. Irregular practitioners of the healing art lack proper mental and professional equipment to successfully meet indications, nor should the profession fail in emphasizing this. The importance of such examinations by the pro-

fession should be stressed in our medical colleges and before our group meetings. A clean bill of health after cursory examination cannot be too strongly condemned, as giving a false sense of security to the examinee. Some one has said "since early cancer is generally the most curable of all major causes of death, a host of people who die of cancer, die as it were of their own hands." Ignorance is no palliation of such fatalities and the general public should be generously and freely supplied with all known information suggesting malignancy. A failure to disseminate scientific data, inevitably encourages the quack, who in pleasing and impressive manner makes false statements and offers hope impossible for him to fulfill. By pamphlet, through the press and most frequently over the radio, does he make his blatant promises which prevent the victim from seeking scientific aid from X-ray, radium and surgery. Woman's innate modesty is responsible for a tremendous toll, preventing her from divulging early indications, until symptoms are so compelling, that fear gains ascendancy and the doctor is consulted. Professional reticence in discussing cures encourages the quack in his false claims, heralding in large print supposed cures—so often fraudulent—frequently with pictures and fake testimonials to bolster his statements, while the doctor in his daily work cures many which are never mentioned. An unfortunate fatality is widely known and if radium was used late, too often the lay mind thinks death resulted therefrom, whereas only palliation should have been expected. Surely the public should be protected from the charlatan, and national legislation should prevent such tragic results as followed the use of Ensol at Orlando, Fla. The product had failed to receive the endorsement of the A. M. A. committee after an exhaustive examination, and suffering humanity should be protected from such mercenary exploitation. Profligacy of promises appeals keenly to those unfortunates, who have neglected early detection and treatment in the hands of the profession, and they eagerly grasp the straw of hope at the hands of the unscrupulous whose one desire is for financial profit. Education must be the watchword and an intensive campaign for public enlightenment as to early symptoms, types of treatment and methods of the quack—is a duty of the profession, especially through our health boards. "Am I my brother's keeper?" could not be answered any more clearly or certainly than in the results that will follow the wise and tactful dissemination of knowledge of the prevention, recognition and eradication of incipient cancer. Surgery's part in this great battle furnishes a brilliant chapter in human prog-

ress and the pioneers in each anatomical locality are deserving of niches in the hall of fame. There is scarcely a portion of the body sacred to the surgeon's magic touch. The frequency with which various organs have been removed in part or whole for cancer has become an old story, hence less spectacular.

We must await the master scientist who will develop some test for earlier recognition, else find the cause and cure of the malady itself, thereby offering hope at every stage. Pending such development, every weapon at our command should be utilized in lessening morbidity and mortality and protecting the gullible public from the mercenary greed of the unscrupulous and ignorant. Governmental aid in the solution of these vital problems should meet with universal approval, and should offer opportunities for brilliant developments in this field of promise. The nineteen millions appropriated by the National Government for this study doubtless offers opportunities for scientists to meet their financial responsibilities and follow leads which may uncover cancer secrets, and make known truths and harness them for the physical protection of man.

The time limit of twenty minutes precludes a full discussion of any disease and permits only mention of many. Medical and lay publications are constantly stressing the vast increase in nervous and mental diseases and our State Hospitals are filled to overflowing. Kentuckians have awakened to their responsibilities for their unfortunates, and the foundation is laid for humanely meeting them. Permanent divorce of politics from institutional control, and the retention of efficient psychiatrists in treatment of these—our loved ones—will attest the genuineness of the promises made by seekers for high office. A united profession should unhesitatingly condemn unkept campaign promises in the interest of those mentally incapacitated.

Rheumatism and allied conditions claim two million victims in the United States, a truly frightful source of incapacity, and Diabetes has become more prevalent and demands constant professional care to safeguard its victims.

The various blood dyscrasias and deficiency diseases are receiving intensive study and are yielding their secrets to the scientists. Much progress has been made but the future offers brilliant prospects for more successful therapy.

Emphasis should be placed on the careful and painstaking examination of every patient by medical teachers to the student and the post-graduate, and our medical societies should stress the same and urge the utilization of every diagnostic aid in reaching a

final conclusion, which will bring its own reward.

Organized medicine has a tremendous task to perform, and in its fulfillment we must present to the world a profession, capable and willing to render the highest type diagnostic skill and medical care to all our people. The failure on the profession's part to meet the challenge will inevitably result in unwise assumption of power by those unfit by reason of deficient education and training, the doctors will cease to make that progress for which the past is noted, and the public will fail to receive those blessings logically expected under the stimulus of individual and co-operative effort.

DISCUSSION

Irvin Abell: Dr. Bell has brought to us in a forceful and interesting manner a realization of the responsibility of the profession in meeting the problem presented by chronic disease. When one considers the great incidence of the chronic diseases, the serious impairment of physical and mental vigor they entail, the toll they take in life itself and the huge economic burdens they impose on their victims, one begins to realize the vastness of the problem and the importance of securing the aid of any and all agencies that may and can operate in the solution. The essayist has properly stressed the import of lay education by trained instructors, particularly in the fields of tuberculosis, syphilis, heart disease and cancer. The responsibility of the individual practicing physician in this program can not be emphasized too strongly. While the physician remains an individualist as far as the application of curative medicine is concerned, he can not remain oblivious to other important elements in our social fabric, since the problems of illness which he solves for the individual have an interest for the community as a whole, particularly in their preventive and social aspects. He has come to a realization that his obligation to society demands an extension of activity far beyond the intimate personal relationship between the individual patient and himself to the broader field of preventive medicine, widening his sphere of responsibility from the care of patients to that of the community of which the patients are a part. The Kentucky Bureau of Vital Statistics reports that the analysis of the death certificates from tuberculosis reveals that the patients had been under the care of a physician for an average of six months. As a result of the accumulated knowledge of this disease it is a known fact that death rarely occurs under two years after infection with the tubercle bacillus, indicating that these patients had gone for eighteen months possibly unrecognized, and certainly untreated and indicating with equal certainty that during this time they were foci of infection for

all who came in contact with them. To a lesser degree a somewhat analogous observation may be made with regard to syphilis, in which failure to treat the disease vigorously during the period of communicability allows of its undue dissemination, making the disease of equal concern with other infectious diseases as a public health problem. In a consecutive series of 138 patients with cancer of the breast coming to our office before 1920, the average time that had elapsed since the first appearance of symptoms of disease in the breast was 15.5 months. While in the last decade the average duration of symptoms has been materially less, there is still a period of known disease, the length of which in many instances is such as to allow extension to a degree that precludes the possibility of cure by any of the known methods of treatment. Such observations as these confront the profession with a problem which in the light of our present knowledge will find solution only at the hands of the individual practicing physician. Only when the possibility of their presence is borne in mind by him, and an intelligent effort made to detect them, will it be feasible to control them by applying preventive, protective and curative measures in their incipency. The character and nature of chronic illness amenable to surgery have not changed, but the indications for its employment have been more definitely defined, with the result that operations for such illnesses are undertaken today when the condition of the patient offers reasonable hope of success rather than postponing such measures to be tried as a last resort. Collapse therapy for pulmonary tuberculosis by means of intrapleural pneumonolysis, extrapleural apicolysis, interruption of the phrenic nerve and thoracoplasty, partial or complete, has contributed materially in decreasing the time required for arrest of the disease.

Pericardiectomy in Pick's Disease, an experimental effort to supplement coronary circulation, and total thyroidectomy in congestive heart failure, with the idea of lessening metabolism and thus decreasing the cardiac load, represent some of the newer surgical thoughts as applied to heart disease.

The treatment of cancer offers nothing new, the time-tried and experience-tested methods being surgery, x-ray and radium, alone or in combination. The three essentials for success are early recognition, accessibility of the lesion and the prompt institution of appropriate treatment. Variations in technique, particularly in the application of x-ray and radium, constitute the chief present day advance.

Modern statistics relating to arthritis indicate it to have attained a commanding position in the list of chronic diseases. In Berlin, for instance, the disability from arthritis is reported

as being between three and four times greater than that from tuberculosis. In Sweden the number of chronic arthritics exceeds those of all other diseases, except the cardiovascular ones of old age. In Massachusetts there is an incidence of 75,000 cases of active tuberculosis as compared with 150,000 cases of active arthritis. The role of surgery in meeting the problem presented by this disease consists, so far, in the elimination of foci of infection and in preventing and correcting the deformities dependent on it. Within the time allotment the essayist could but touch upon some of the chronic diseases, one of which was nervous and mental ailments. Until within comparatively recent years the major emphasis in developing the physician's concept of disease has been organic pathological change; this has interfered with the broader concept of distress of the person as a whole, the importance of which is beginning to receive the stress it deserves. A neurosis is an illness in which the psychological component in the etiology predominates over the physical and chemical components. As I have seen them in my practice the psychoneurotics fall into two groups, one in which the complaints are so multitudinous as to stamp them at once as psychogenic in origin, the other in which the complaints are focused on one organ or system of organs, at times with such verisimilitude as to be perplexing. Patients of the first group frequently give a history of previous "breakdowns," often come with a written list of their symptoms so numerous that they fear to trust to memory for their recital, if by chance any particular body function or organ has been overlooked by them, a direct question on the part of the examiner starts a fresh flood of details. The only contact which a surgeon should have with this group is that of directing its members to a qualified specialist in this field. The second group, in which the symptoms are focused on the organ or system of organs, presents physical disease pictures traceable to emotional factors and require more detailed study. While doubtless no organ in the body is exempt from psychoneurotic solicitude, the ones most frequently noted in my experience are the digestive system, pelvic organs, colon, appendix, kidney and thyroid. The bizarre dyspepsia, the dropped stomach, the fallen womb, the chronic colitis, the chronic appendix, the floating kidney and the choking thyroid, all afford suggestive leads but require careful study for their correct evaluation and a distinction between demonstrable pathological change and the energy of unconscious self-expression, the one amenable to surgery, the other augmented by it. All of us have seen pitiable examples of the latter, the appendix and gall-bladder having been removed, the kidney anchored, the uterus suspended, the ovaries re-

sected and the stomach subjected to fixation or drainage with the final condition of the patient worse than the initial one. It does happen that persons with psychoneurosis develop genuine surgical lesions: in the event the latter are urgent, there can be no equivocation and the indicated surgical procedures must be carried out; when, however, the lesion belongs to the elective class, there is some room for debate. We have carried out elective procedures under such circumstances with happy results, the patients later seeming better able to adjust themselves to the stress and strain of everyday activities and responsibilities. On the contrary, we have had the opposite experience in which the end result gave the impression that we had taken out one pain and left in two. The degree of psychoneurosis and the extent of discomfort, something difficult to evaluate, with the potentiality of the lesion for harm, should be the determining factors in making a decision for or against operation.

The many and varied phases of chronic disease present intricacies and difficulties which require the earnest consideration and active cooperation of all elements of the profession in reducing the physical, mental and economic distress occasioned by them.

The role of surgery in their elimination is of necessity a large one since chronic disease, when local in character, so frequently requires eradication for its cure.

Arthur T. McCormack, Louisville: I want to congratulate those of you who were present on having heard in the masterly paper presented by Dr. Bell and, also in the discussion which has preceded, the fine philosophy of medicine. If every physician had thought these things through and had followed these precepts thoroughly, as we know how to do if we have the energy and the brains and the magnetism and the persuasion to do it, we would never have any problems confronting us in regard to public confidence in us, we would never have any assaults on us made by anybody, because they would know we were immune to assault, and just in proportion as we can ourselves do these things we are safe as the guardians of the health and lives of our people.

Dr. Bell and those who have discussed his paper have presented to you the philosophy, the human religion, we might say, that is the basis of the whole program of the Kentucky State Medical Association. They have brought up to date the philosophy of the earliest physicians and have made it presently applicable to the problems that confront us in our everyday life.

I don't think anything impressed me more in this masterly paper than the emphasis on the fact that the health department is the educa-

tional agency to introduce into the public mind the newer activities and discoveries of medicine and to constantly maintain in them, that is the public, confidence in the practitioner of medicine.

I think I can say to you that, in the State Health Department of Kentucky, which is of course the official agency that represents you in service to the people of this state, we consider the one measure we can definitely determine from year to year or in five-year periods as perfectly measurable, whether more people are coming to doctors' offices or sending for doctors to come to see them earlier in the disease which they have, and more people are coming for periodic health examinations, when they are apparently well, more are coming under the guidance of the profession. Just in proportion as the health department is succeeding in doing that thing it is performing its highest function that we can measure in actual figures, we can know definitely that is being accomplished. If the health department in your county is not doing it, I can say to you frankly it is because your board of health is not meeting regularly with your health officer, it is because you are not guiding that health officer, and naturally his inclination is to do the things that are most pressing and from which he will get the quickest response.

There are many problems that are confronting every health officer. We haven't enough personnel to solve them all, but we can do this thing, and if the members of the board of health and their medical men will meet regularly with their medical officers and discuss these problems so that the health officer understands the philosophy of the profession and the profession understands the opportunities which the health officer has to help them, we will make far more rapid progress not merely in the prevention of disease, but also in its amelioration and treatment and cure and in the care of those chronic cases of which there are some twelve million in these United States, many of them not being cared for at all, many of them coming into doctors' offices and being told, "There is nothing I can do for you," and the natural thing for them to do is to go to the man not limited by any knowledge of the subject who can make any sort of a specious promise and can continue to victimize the patient over long periods of time. But if you are a qualified physician there is no patient not yet dead that you cannot make more comfortable, and you can not only make him more comfortable, but you can make his family more comfortable and you can put them certainly in a better humor in which they have more confidence in our whole profession. Just in so far as we neglect the least of these we are neglecting our obligation and

our greatest duty. If we are willing as practicing physicians to assume vaccination not merely of those who come into our offices seeking it, but also in every single one of the patients for whom we are responsible and for those poor unfortunate, ignorant people who have no physician at all but who are in our environs, if we are willing to inoculate all those for diphtheria that are in our practice or in our environs; if we are willing to inoculate them for typhoid fever; just as soon as the profession is ready to do these things just that soon will the state gladly drop the matter entirely. We want to do it but we can't do it because we are charged with the responsibility under the laws which you have recommended for doing whatever you fail to do, and we will continue to carry out our obligation of the law as long as you are guilty of that failure. Remember that as soon as you are ready to do the job in your own practice, in your own environment, (we know it is your job and we are only doing it because it is your job and because you are leaving it undone) we will relinquish it.

Austin Bell, (in closing): I don't think I have anything to add to what has been said. I do wish to express my appreciation for the excellent discussion. I appreciate it beyond expression. I realized fully that if I tried to prepare a paper on this subject I would dilate too much on some things and leave others unsaid, but it was utterly impossible to cover even the moderate amount that should be covered in a discussion of chronic diseases in twenty minutes' time.

Alcohol Determinations in Necropsies.—Guldberg performed forty-nine legal necropsies in which determinations of alcohol were made and illustrates by examples from these cases how the tests may check and supplement the results of necropsy and other evidence produced. In four of seven cases the alcohol concentration in the stomach was found to differ from that in the blood and urine. He considers the possibility of a diffusion of alcohol from the stomach into the immediate neighborhood and points out that too high values may be obtained in specimens of blood from the heart; he advises taking blood for alcohol determinations in legal cases from places remote from the stomach. In one case the test was successfully made in the blood eleven days after death, in another in the urine seven weeks after death.

HODGKIN'S DISEASE IN CHILDHOOD*

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The disease entity which came to be known as Hodgkin's disease was described by Thomas Hodgkin in 1832. In Germany the disease is known as lympho-granulomatosis, and other synonyms are lymphoblastoma and lymphadenoma. It is a subacute or chronic fatal disease characterized by painless, progressive enlargement of lymphoid tissue, which is usually accompanied by intermittent fever, and an anemia.

It occurs more often in adults than in children. Burnam reported that of 173 cases observed in Baltimore, only 2.45 per cent were in children. Corbeille reported a series of 33 cases in children observed at the Mayo Clinic from 1900 to 1928. The youngest case to be reported was that of Priesel and Winkelbauer, an infant apparently born with the disease and dying at 4 1-2 months. Of 38 cases seen at the Louisville City Hospital in the past ten years, 7 have been in children. Two additional cases were observed at the Children's Free Hospital in the past four years. The disease occurs more often in males than in females, the ratio being 2:1 to 3:1. In children, this preponderance in the male is said to be even more striking. Of the nine childhood cases whose records I saw, only two were in girls. It is said to be rare in Negroes. Three of our cases were in Negro children.

The etiology of the disease is unknown. There are two schools of thought, one holding that the disease is an infectious granuloma; the other, that it is a neoplasm. Custer, in an excellent chapter on the disease in Brenneman's Practice of Pediatrics, seems to favor infection as the etiological agent. For many years, tuberculosis was thought to be a factor, and even as late as 1930 L'Esperance tried to incriminate the avian tubercle bacillus. Diphtheroids and streptococci have been extensively studied in relation to this disease. One of our cases had a positive blood culture for diphtherioid organisms. He also had tuberculosis.

Recently, M. H. Gordon, of London, has isolated a virus-like agent from the lymph nodes, and has devised a diagnostic test, injecting animals with a macerated suspension of lymphoid tissue. A positive test consists of the death of the animal with paralytic symptoms.

The pathology of the disease consists of hyperplasia of the lymphoid tissues everywhere, the superficial and deep lymph nodes,

*Read before the Jefferson County Medical Association.

and the lymphoid tissue of the bones, viscera, and nervous system. Histologically, the lymph nodes show proliferation of the reticulo-endothelial cells; eosinophilic cells; and lymphoid cells. Certain of the reticulo-endothelial cells assume the giant multinuclear form, known as Dorothy Reed cells. In the later stages, fibrosis is marked, and may replace most of the cells. Usually, the glands do not break through their capsules, but occasionally they may do so. Dr. Gordon in his discussion will go into more detail on the pathology of the disease.

The first symptom of the disease is usually painless swelling of one or more groups of superficial nodes, the cervical group usually being the first to show involvement. In a good many cases, an acute upper respiratory infection, an abscessed tooth, or one of the acute exanthemata of childhood precedes the onset. In some of the cases, the superficial glands do not become enlarged until late in the disease, and the first symptoms are those associated with enlargement of the mediastinal or mesenteric nodes, such as cough, dyspnea, or gastro-intestinal symptoms; or there may be a sense of heaviness in the abdomen due to the enlarged spleen. In other cases, weakness, loss of weight, pallor, or an unexplained fever may be the first symptoms.

In our nine childhood cases, the presenting symptom was enlargement of the superficial glands in three cases; in four, cough, with or without fever was the outstanding symptom; in one subacute case, fever, pallor, and hemorrhages brought the child to the hospital. In one case, herpes zoster was the presenting symptom and called attention to the lymphadenopathy.

The enlargement of the glands may be progressive, and sooner or later spreads to involve all of the superficial chains; however, even in untreated cases, the glands may undergo regression, only to recur later. This was a striking feature of Corbeille's childhood cases at Mayo's. Various pressure symptoms appear, depending on the location of the enlarged glands. Pressure in the neck may cause dyspnea, dysphagia, or edema of the face. Pressure in the mediastinal area causes dyspnea and cough. Signs of portal obstruction may develop in abdominal involvement. One of the cases in our series had a typical Banti's syndrome, and splenectomy was performed with that diagnosis in mind.

Fever is usually present, and is most often of the Pel-Ebstein type, in which periods of pyrexia of several days' of several weeks' duration alternate with afebrile periods. This type is considered rather characteristic of the disease. Only two of our cases had a

febrile reaction resembling this type. Others showed continuous low-grade or high fever, and in some instances the temperature was septic.

In the terminal stages, anemia, and cachexia are usually present. Death may result from asphyxia by pressure of the enlarged glands, from exhaustion, or from intercurrent infection. Two of the cases in this series died with signs of pulmonary edema, one of them following operation; another patient died following rupture of the bowel.

On examination, the glands vary in consistency from soft to elastic or hard, depending on the stage of the disease. They are discrete and not attached to the skin. A single group may be involved at the onset, but the involvement usually spreads. Edema or dilated superficial veins may be present due to pressure. The spleen usually becomes enlarged, and the liver frequently also. Skin lesions, such as simple prurigo, herpes zoster, pigmentation, and nodular lesions consisting of Hodgkin's tissue in the skin, may be present.

The blood findings are not diagnostic. An anemia is usually present in the later stages. Most of our cases showed anemia. In the later stages also, there is usually a polymorphonuclear leucocytosis. In four of our cases there was leucocytosis; in five, a leukopenia. Blood platelets and monocytes are usually increased. There may be an eosinophilia; this was present in only one of our patients, an asthmatic.

In diagnosis, the history, and the size and consistency of the glands on palpation are important. Tuberculous glands are coalescent and usually adherent to the skin; as a rule, one group of glands, cervical, mediastinal, or mesenteric is involved. Tuberculous glands show a tendency to inflammatory reaction and suppuration, and to calcification. Neither of these reactions occur in Hodgkin's disease. The tuberculin test may be helpful if it is negative. Lymphosarcoma is more often localized to one area, but tends to invade surrounding tissue; in some cases, it is not possible to differentiate the two conditions except by biopsy. Leukemia exhibits less lymphatic enlargement, and usually progresses more rapidly; the blood count and biopsy differentiate between the two conditions.

Treatment consists of irradiation of the enlarged glands either with radium or roentgen-rays, the latter being the more frequently used. Details of the treatment vary with the individual case, and should be left to the roentgenologist. Custer recommends heavy doses of X-ray at infrequent intervals, because smaller doses may give rise to secondary

stimulation rather than a depression of the lymphocytes. Arsenic is still recommended as being beneficial, especially in relieving pruritis. It was not used in any of our cases. Supportive treatment and treatment of the anemia are indicated. Surgery may be advisable in some cases for the relief of pressure symptoms. Removal of foci of infection is indicated in chronic cases.

The prognosis in untreated cases is hopeless. In the acute cases, treatment does not seem to offer much. However, the chronic cases, particularly those in which treatment is begun while the process is localized to one group of glands, respond well to roentgen-therapy at least for a time. According to Burnam, the prognosis is best in those cases having marked enlargement of the superficial glands, and not as good in those with involvement of the mesenteric or mediastinal glands. In 1926, he reported a series of 173 cases, of which 28 were regarded as cured after periods of one to ten years. Nine other cases were alive, but with evidence of the disease after two to six years. Since that time, Holt reports that Burnam has some patients who have had no recurrence after as long as 15 years. In Corbeille's series in children, the average duration was 22 1-2 months. One patient, treated every two months, was alive and apparently well except for some adenopathy after 5 1-2 years. One of our cases is alive and well more than four years after the onset of symptoms; another, after 3 1-2 years. Two patients have not been heard from since receiving treatment. There were four subacute cases in our series, the duration being from six to nine months. One chronic case lived three years without any specific treatment; this was the patient with the Banti's syndrome.

Three brief case histories are presented.

The first case is interesting because of a complicating tuberculosis. J. C., male, colored, age 7 years, was admitted to the Louisville City Hospital, November 19th, 1933, with a history of a cold and cough of about two weeks' duration, together with pain in the right chest and shoulder, the symptoms gradually increasing up to the time of admission to the hospital. On the day of admission, the family noticed fever for the first time; the patient complained of headache; his appetite was poor; and he remained in bed. The patient's past history was irrelevant, and the family history was negative except for one miscarriage.

The temperature on admission was 103, the pulse 134, and respirations, 32. Examination of the chest showed shallow respirations, impairment of the percussion note over both root areas, in the upper and mid-

portions posteriorly. Breath sounds were somewhat diminished over the left lung, and expiration was prolonged in both bases. Many fine moist rales were present over both bases posteriorly. The pharynx was mildly injected. The abdomen was distended, and there was a phimosis. There was no enlargement of any of the superficial lymph nodes.

The blood count showed a mild secondary anemia and a polymorphonuclear leucocytosis. Urinalysis was negative. A Mantoux test was strongly positive, with bleb formation.

The admission diagnosis was bronchopneumonia, and two days later, the diagnosis of juvenile tuberculosis was added.

The patient was in the hospital 127 days, and his course was febrile throughout. During the first month, the temperature remained above 100 most of the time, with maximum of 103 to 105. Following a citrated blood transfusion on December 20th, the 32nd hospital day, the temperature peaks became somewhat lower.

The chest findings remained essentially the same during the first month. At the end of that time, the rales became coarser, and a few weeks later disappeared, the pathology persisting for a longer time in the left chest. There was a persistent impairment of the percussion note in both root areas. On December 16th, 1933, it was noted for the first time that the patient had an enlarged cervical gland on the left, about 3 by 2 cm. This had subsided somewhat by the end of the patient's first hospital stay.

There was a polymorphonuclear leucocytosis throughout the patient's hospital stay. Repeated supravital stains showed from 9 to 18 per cent monocytes. The sedimentation rate was very rapid. Electrocardiographs showed only sinus tachycardia. Ten sputum examinations and ten gastric washings showed no tubercle bacilli. A blood culture on March 8, 1934, showed diphtheroids; unfortunately, this was not checked. X-ray on admission showed cloudiness and soft mottling throughout both lungs, consistent with bronchopneumonia. There was an area of increased density in the right upper lobe, which we interpreted as probably a tuberculous gland. The pneumonic process gradually cleared after the first month, with a persistence of the mass in the right superior mediastinum, and later some increase in the size of the mass. It was the opinion of the pediatric staff and of the roentgenologists that this mass was a group of mediastinal glands, probably tuberculous.

Dr. Oscar Miller saw this patient in consultation and felt that the patient was "negative for tuberculosis, although a large tuber-

culous node of the right root region would have to be considered." He also considered the possibility of an azygos lobe with atelectasis, or of a persistent thymus. At the later date, Dr. Miller expressed the opinion that the symptoms were not entirely due to pulmonary pathology, but that the evidence was presumptive of hilum tuberculosis.

The patient was transferred to Waverly Hills Sanatorium March 12th, 1934. While there, he developed generalized lymphadenopathy, which was most marked in the cervical nodes. He continued to have fever at the sanatorium, and during June, this became more septic, reaching as high as 103 to 104 at times. On June 15th, it was noted that there was protrusion of the upper portion of the sternum, and that the cervical glands were rapidly enlarging. Biopsy was made June 23rd. Dr. A. J. Miller's opinion of the biopsy was that the lesion was typically a rather advanced Hodgkin's. No suggestion of tuberculosis was seen. He added that the two conditions might coexist.

The patient was readmitted to the City Hospital July 14th, 1934. His temperature was 101. He was emaciated and looked ill. All of the superficial lymph glands were palpable, discrete, and firm; and there was marked enlargement of the right anterior cervical chain. There was dullness to percussion over the right apex and widening of mediastinum. There was a fluctuant mass at the third right costo-chondral junction. The spleen was enlarged. The pharynx was inflamed.

X-ray of the chest showed the mass still present in the right upper mediastinum. There was a secondary anemia, and a moderate polymorphonuclear leucocytosis.

On July 28th and 31st, and August 1st and 3rd, the patient was given 160r units each of roentgen therapy over the thorax and roots of the neck, a total of 640r units. On August 27th, there was an increase in the mottling in the lung fields. About September 1st, the patient began to complain of severe frontal headaches, and the next day, the neck was rigid, and the extremities spastic. The clinical course and spinal fluid findings were characteristic of tuberculous meningitis, although no tubercle bacilli were found in the fluid, and no tubercles were seen in the choroid. Terminally, signs of bronchopneumonia and pleural effusion developed. The patient expired September 14th, 1934. Autopsy was refused.

The question in this case is whether or not the X-ray, diagnostic and therapeutic, over the thorax, produced an exacerbation of the tuberculous process there, with dissemination into the blood stream, and a subsequent meningitis. It is of interest that aspiration of the fluctuant mass over the sternum yielded

purulent-looking material; guinea-pig inoculation resulted in death of the animal from tuberculosis.

Custer states that "the hyperplastic form of tuberculous lymphadenitis, aleukemic reticulosis, and retrothelial sarcoma may present a histological picture almost indistinguishable from Hodgkin's disease." Boyd states "it is well for the physician to bear in mind these limitations of the pathologist's microscope."

Osler described a form of generalized tuberculous adenitis which occurs particularly among Negroes and simulates Hodgkin's disease, with enlargement of the gland groups in the neck, arms, and axilla, never perhaps as much as in Hodgkin's disease. There is irregular remittent fever, not with periods of apyrexia.

R. C., a male white child, has been under our observation since November 19th, 1932, when the patient was three years old. At that time he was admitted to the City Hospital with a history of asthma since the age of one year. Previous to that time he had had infantile eczema. For ten months prior to admission the patient had had frequent hematomata and purpuric spots, often due to slight pressure, and nosebleeds about once a month. The night before admission, hematemesis had occurred for the first time.

Examination showed a normal temperature. The patient was wheezing and coughing and was dyspneic. The chest findings were typical of bronchial asthma. There were many purpuric and petechial spots in the skin, mucous membrane, and conjunctivae. The spleen was palpable. The patient appeared quite anemic. There was a chronic tonsillitis.

The blood count showed a moderate secondary anemia, a mild leucocytosis and an eosinophilia, plastic counts varying from 120,000 to 185,000. Bleeding and coagulation time were normal. The clot was nonretractile.

Skin tests showed sensitivity to ragweed, house dust, and numerous foods. Four transfusions were given, and the patient continued to have nose bleeds and on two occasions, bloody stools were passed. Following a fifth transfusion, a splenectomy was done by R. A. Griswold on February 6th, 1933. The patient made an uneventful recovery, and on February 12th, there was normal clot retraction after one hour. The platelet count promptly rose to normal. Microscopic examination of the spleen showed a chronic splenitis, and the pathologist stated that the picture was also compatible with a diagnosis of thrombocytopenic purpura. The patient was dismissed from the hospital in good condition on February 22nd, 1933.

Nine months later, the patient had a mild epistaxis and a few petechial and purpuric

spots, during an asthmatic attack. This subsided without any treatment.

The patient was seen in Children's Clinic frequently during the next eighteen months, usually for asthma. On one occasion, he had an angioneurotic edema after eating peanuts. He also had measles and pertussis during this period. He had bronchopneumonia in February 1935. The temperature on clinic visits was usually from 99 to 100.

On May 31st 1935, the patient came to Children's Clinic with a herpes zoster following the course of the tenth left intercostal nerve, of one week's duration. There were four subcutaneous nodules, about .5 to 1 cm. in diameter, on the anterior chest wall on the same side. There was one palpable occipital node. There was moderate cervical adenopathy. There were small palpable epitrochlear and axillary glands.

He was admitted to the ward for biopsy of one of the nodes. A biopsy taken June 1st was diagnosed as an early lymphoblastoma of the Hodgkin's type. The blood count was as follows: R. B. C., 4,790,000; Hem., 60 per cent, W. B. C., 17,200; polys., 62 per cent; lymphos., 35 per cent; Eos., 2 per cent; Basof, 1 per cent; platelets, 287,000. Three weeks later, the patient was started on roentgen-therapy over all of the involved glands; he was given 300 roentgen units over each of seven areas.

In October, all the glands except the cervical and inguinal had receded markedly. The patient had lost two pounds, and it was decided to give another course of X-ray over these areas. 450r units were given over the four areas. The blood count at that time was normal except for 6 per cent eosinophiles, and this was just after an asthmatic attack. X-ray examination of the chest showed no widening of the mediastinum.

The inguinal and cervical glands decreased in size following the second course of treatments. The so-called tonsillar glands remained enlarged, however, and since the patient had had several attacks of tonsillitis, and the tonsils appeared infected, adenotonsillectomy was performed June 24th, 1937. Biopsy was requested, but unfortunately, the specimen did not reach the laboratory.

In November 1937, there was again a small gland palpable on the anterior chest wall. This was excised for biopsy by Dr. Pat Imes. The diagnosis was again "lymphoblastoma of the Hodgkin's type." The patient was given two treatments of 150r units each over the mediastinum. Following this there was again decrease in the size of the glands, the submaxillary lymph glands and the inguinal glands remaining somewhat larger than the others. Regression of glands over untreated

areas sometimes follows treatment of an area elsewhere. The right submaxillary gland subsided further after extraction of an abscessed premolar tooth.

During the past summer, the patient, who is sensitive to ragweed, has been very uncomfortable with asthma. At the present time, 3 1-2 years after onset, there are small palpable glands in the cervical, inguinal, and axillary regions, which are firm, discrete, and not tender. A biopsy taken September 27th, 1938, was reported lymphoblastoma. At that time, Drs. A. J. Miller and Harold Gordon reviewed the sections of the two previous biopsies. Dr. Miller found large multinuclear cells suggestive of Dorothy Reed cells in the sections of three years ago. There were none of these cells in the last sections. There were more primitive cells in the recent biopsy than in that of three years ago.

The patient had gained 11 pounds since the onset of the disease. There is no secondary anemia. On October 8th, 1938, the total white blood count was 16,450. There were 10 per cent monocytes, 3 per cent metamyelocytes. Many of the polys. were young cells, as also a fair proportion of the large lymphocytes. (H. Gordon)

M. E. B., aged eight years, was admitted to the City Hospital, October 18th, 1935, with complaints of anorexia, loss of weight, dry cough, night sweats, and evening fever, of thirteen months duration.

Examination showed a normal temperature, malnutrition, old rickets, generalized lymphadenopathy, and an enlarged spleen. There was one palpable gland on the left thoracic wall in the axillary line.

The blood count showed a mild anemia, a slight leukopenia, and many young lymphocytes on smear. The platelet count was 195,000. No sickle cells and no malaria were seen. The tuberculin and Kahn tests and stool examination were negative. Urinalysis showed one plus albumin and a pyuria. X-ray of the chest showed increase in lung markings extending into the peripheral zone. The mediastinum was not widened.

Biopsy October 22nd, 1935, showed marked fibrosis; many polys and mononuclears; and giant cells with large nuclei; a moderate number of mitotic figures were seen. The diagnosis was Hodgkin's disease. The patient was given a total of 375r units of roentgen therapy over each axilla.

The patient's course in the hospital was afebrile throughout. She was dismissed from the hospital on November 7th, 1935. She was instructed to return for further observation in Clinic, but did not return after her X-ray treatments were completed.

She was brought in for check-up on No-

vember 1st, 1938, three years after treatment, and four years after the onset of her symptoms. Examination now shows firm, non-tender lymph nodes in the submaxillary, posterior cervical, axillary, epitrochlear, and inguinal regions. The spleen is not palpable. The patient is somewhat under weight, and complains of cough, headache, and abdominal pain. The latter is thought to be due to too frequent administration of cathartics by the grandmother.

Blood count is shown in the table. X-ray of the chest shows possibly slight enlargement of the mediastinal glands on the right.

DISCUSSION

Harold Gordon: Dr. Limper's presentation is a timely one since it draws attention to the fact that Hodgkin's disease may present usual clinical and pathological features. With respect to its histopathology Hodgkin's disease may show simple or complex appearances. The microscopic diagnosis is simple when the disease conforms to the classic textbook description epithelioid cell and eosinophil infiltration, giant cell formation and fibroblastic proliferation. However, this picture is seen in less than fifty per cent of the cases and eosinophilic infiltration, emphasized in all the text-books, is said to occur in only fifteen to twenty per cent of the cases. The appearance is complex and difficult to interpret when there is much caseation necrosis or when there is so-called sarcomatous transformation. I believe the presence of myeloid giant cells and loss of normal lymph-node architecture constitute the most important criteria for a microscopic diagnosis of Hodgkin's disease.

Dr. Limper has indicated the two current views as to the etiology of the disease, infectious and neoplastic. I believe the disease is neoplastic and Gordon's encephalitogenic agent does not necessarily disprove a neoplastic origin since there is some evidence that Gordon's material may be a ferment and not a virus. An interesting feature about Hodgkin's disease is the geographic distribution. Hodgkin's disease is widespread, but certain localities are likely to show a concentration of cases and it is important to keep this in mind. This may be evidence that a constitutional factor plays some part in the etiology of the disease.

I do not believe it is advisable to use the word "cure" with respect to Hodgkin's disease since the condition may run a protracted course extending over as many as seventeen years. The patient may be symptom-free during most of this period yet die of the disease.

The question of treatment is also important. Here again two views are currently held. One utilizes x-ray in small doses at relatively short intervals; the other advises heavy doses given at long intervals. It seems to me the second method offers more than the first.

Dr. Limper's second case is of especial importance since it is an example of so-called sarcomatous transformation of Hodgkin's disease. This is one of the strongest arguments for regarding the disease as a true neoplasm. A certain number of cases undergo sarcomatous transformation and these have all of the earmarks of a very malignant neoplasm.

M. A. Limper, (in closing): I agree with Dr. Gordon that we probably should not use the term "cure" in speaking of arrests in this disease. My own experience has been limited, and the term "cured" was borrowed from another author.

IMMEDIATE REPAIR OF PERINEAL LACERATIONS*

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Brodhead.

For many years I have been impressed with the large number of perineal tears in primipara. I would have guessed it to have occurred in one third to one half of the cases. Several years ago in going over my obstetric record I found that about 70 per cent of primipara and about 20 per cent of multipara would tear sufficiently to require suturing. DeLee, in his sixth edition, says that perineal tears occur with a varying frequency, from nine to 75 per cent, as put by different authors. Dr. McCord, who gave several lectures in the state, on obstetrics, several years ago, in conversation with the writer placed perineal tears in primipara at about 90 per cent. Certainly one who estimates below 50 per cent, for the general run of cases in primipara, is wrong.

The skin and mucous membrane may not always show a laceration, while the tissues beneath may be seriously involved, by the stretching process incident to labor, thereby creating a relaxed condition of the vaginal outlet. The repair mentioned in this paper does not refer to such cases.

The writer has never found any sure and satisfactory way of preventing perineal tears. If the labor can be so regulated as to have a moderately slow delivery, at the last, that will probably help. Ironing out, or stretching, the perineum with the fingers, before the head impinges on it, may also help. If it is a forceps case we should fight against the desire to terminate the delivery too rapidly. Finally we may resort to episiotomy in cases that require rapid delivery. Of course this amounts to a tear, but by doing a diagonal episiotomy we may prevent a tear into the bowel. I feel that episiotomy is especially indicated in breech deliveries in primipara. It gives more room for bringing down the

*Read before the Rockcastle County Medical Society.

arms. I am opposed to the median episiotomy on account of the danger of the cut being further extended by tearing into the bowel to avoid which is one of the reasons for doing an episiotomy.

There are three degrees of perineal tears as follows: First, tears of the fraenum or posterior commissure, not exceeding 3-4 of an inch toward the anus. Second, all tears greater than these which do not involve the sphincter and bowel. Those in which the sphincter and bowel are involved are termed third degree tears.

Tears of the perineum seldom bleed profusely. A tear through the clitoris, or a crus of the clitoris, may be followed by serious, or even fatal hemorrhage. I have never seen severe hemorrhage following episiotomy.

Practically every tear of the perineum, excepting superficial wounds of the skin and mucous membrane which simply split the skin, requires repairing. It is not always advisable to do it immediately after labor. If the patient is in severe shock repair had better be postponed, though it may be done in a day or two, if the patient has sufficiently recovered. If you can not do it within three or four days do not attempt primary repair, as the wound soon begins to be covered over with mucous membrane. Cases which are clearly infected had best not be subjected to primary repair. Three times, in patients who had previously had perineorrhaphies and had sustained lacerations in subsequent labors, I have found a small cyst containing pus. This pus was probably sterile, though in each I declined to do a primary repair.

At the present time there is seldom any good reason for not repairing ordinary perineal tears within the first twelve or twenty-four hours, while on the other hand there is much to be said in favor of doing so. In the first place the woman has to remain in bed any way and this time may well be utilized in the healing of her perineal tear. In the second place the raw surfaces are already exposed and do not require the extensive denudation that may be necessary in a secondary repair. In the third place if it is not repaired immediately it will possibly never be, as most women will fail to have a secondary repair; some on account of ignorance, some on account of the dread of an operation and many on account of the expense involved.

One will not always get a perfect result from a primary repair, neither will he from a secondary one. However, after all factors are considered I am strongly in favor of the primary procedure, so much so that I feel that I have not done my duty if I fail to do the primary repair, unless there are circumstances contra indicating it in the particular case.

The time is at hand when even old tears are being repaired following labor, thus utilizing the time spent in bed. Unless it has been a difficult labor there is very little additional shock. The secondary repair of old lacerations, following labor, is especially advisable where there is an additional tear from the present labor. Simply repairing the additional tear of the present labor and ignoring the damage done in a former confinement is not the best practice. If there is no tear from the present labor it may be questionable to do a secondary operation on an old laceration, at this time, though in many cases it may well be considered, in as much as many of these women will never get the benefit of such an operation if it is not done at a time when they are otherwise confined to bed.

In doing the primary repair if one gives ergot immediately following labor and waits five or six hours he may not be bothered so much with the lochial discharge as he will in doing the work at once; however, it is my practice to proceed with the repair work as soon as I can get ready after delivering the placenta.

In this paper I have not especially emphasized the necessity for a strict aseptic technique. That should be understood without having to be mentioned. If we have been negligent in the aseptic conduct of the labor, we are not so apt to get a good result from the perineal repair.

Very few instruments are required; a needle holder, pair of scissors, two or three haemostats, tissue forceps and needles are sufficient. Some may want a retractor. I usually use No. 2 or 3 forty day catgut, already threaded on full curved, atraumatic needles. The atraumatic needle is a decided improvement over the old style needle; however I have experienced some trouble from this needle turning in the needle holder. One or two old style needles should be prepared with the instruments, to be used in the event the atraumatic needle gets out of commission from any cause, as once it is severed from the suture it can not be rethreaded.

When I prepare to do a forceps delivery I, at the same time, make preparation for repairing the perineum.

In doing this work in the home I have many times had another doctor to administer the ether, but more frequently I have not. It is nothing unusual for me to assume the responsibility of the anesthetic and operation, even without a trained nurse to sponge for me. You may say that this is too much responsibility for one man. Perhaps it is, but I have done it for many years and have had no serious trouble from the ether. Some cases may be done under local anes-

thetia, though I have usually used ether. For economic reasons many patients, if they have to have another doctor and a trained nurse, will go without the repair and I feel that by doing the best I can, under the circumstances, I give them a chance at a pretty fair result.

The patient is placed crosswise of the bed, with the buttocks at the edge, the legs being held by assistants, who sit on either side of the patient.

If it has been an instrumental delivery I have started the ether and turned it over to one of the helpers, who continues it. When ready for perineal repair I either start the ether again, or let the one who gave it for me the first time do so.

One essential to a good repair job is a good light. An assistant to sponge the blood out of the way is also an advantage, though one I seldom enjoy.

The patient is supposed to have already been prepared for labor, but always requires additional preparation for perineorrhaphy. Wash the lower abdomen, the inner aspects of the thighs, the vulva and anal regions with soap and water. When cleansing the vulva and anal regions be careful to sponge from above downward and discard the sponge after it has been about the anus.

Having cleansed the outer parts, squeeze the blood out of the womb and sponge out the vagina to ascertain the extent of the injury. Having done this apply a sterile sheet, with an opening in it, or drape the parts with sterile towels. If you do not carry these things with you they can be prepared by boiling for fifteen minutes and are serviceable that way, though not so desirable.

When ready to begin place a good size piece of cotton, or gauze in the upper part of the vagina to absorb the blood. Tell the bystanders to not let you forget to remove it after you are through.

Tears down to the sphincter are more or less common and even if the sphincter is torn only part way through I do not think the case very serious, provided the bowel above the sphincter is not torn.

Third degree tears, or those extending through the sphincter and into the bowel are very infrequent, but if the mucous membrane of the bowel is torn much above the sphincter the chances of primary union are not so good and if possible, these cases should preferably be treated in the hospital; both on account of being more technically difficult to repair and on account of the after treatment. In the hospital the patient may be nourished largely by glucose intravenously, thereby giving the bowel greater rest. Practically all cases in which the bowel is not in-

volved may be repaired in the home.

When confronted with a laceration of the bowel, extending above the sphincter, first irrigate the parts with a 1:5000 bichloride solution, or sponge it freely with this solution. The bowel may be closed with interrupted sutures of silk or linen, placed 3-16 of an inch apart. Begin at the upper angle of the wound and insert the needle through the mucous membrane of the bowel up into the raw surface and bring it back on the other side, through the raw surface, then through the mucous membrane of the bowel, where it is tied in the bowel. After healing these sutures gradually cut through the tissues and drop out. After inserting the first line of sutures in the bowel irrigate the vagina with a 1:5000 bichloride solution, or thoroughly sponge it with the same. The primary line of sutures in the bowel should be reinforced with a second row of interrupted sutures of No. 1, 20 or 30 day catgut, placed about 3-16 of an inch apart.

Instead of closing the bowel with silk or linen, as described the first line of sutures may be of No. 1, 20-day catgut, placed 3-16 of an inch apart, but where catgut is used the suture must not enter the lumen of the bowel. Insert the needle in the raw surface and carry it down to, but not through the mucous membrane of the bowel, then insert it in the raw surface, just above the mucous membrane, on the opposite side and tie it. The procedure from here on may be as described above, where silk or linen has been used.

Having closed the bowel the next step is to unite the severed ends of the sphincter ani, one end of which may have receded into its sheath. If such is the case catch the free end gently with a hemostat and search for the other end with a hemostat or tissue forcep. The sphincter may be united with No. 2, 40 day catgut, putting two or three interrupted stitches deeply into each end of the muscle. One of these stitches should unite the fascia surrounding the muscle.

After putting the first line of sutures in the bowel and uniting the sphincter, the vagina should be cleansed with an antiseptic solution and the operator and assistant should put on fresh sterile gloves. All instruments having been used in the bowel should be discarded until sterilized.

Up to this point we have been dealing with the unusual. Having united the mucous membrane of the bowel, having put in a line of reinforcing sutures and having united the torn sphincter we face the ordinary, or usual, primary perineorrhaphy; except that we are more prone to have infection, on account of

the bowel having been opened.

The essential thing in perineal repair is to bring the torn fascia and muscles together and then bring the muscular sling together, from side to side, so as to form a support. The fascia is difficult if not impossible, to recognize in lacerations immediately after labor. Unite, end to end, any tears in the levator muscle. If the tear extends up into the vaginal fornix begin at the upper end and unite this first. Having united, end to end, any tears in the levator then proceed to make a strong muscular sling by bringing together, from side to side, the levator muscle. This may be done by using figure of eight sutures. Begin by inserting the needle through the skin on the left side, taking a deep bite into the muscle on that side, then a deep bite into the muscle on the right side, thence again deeply into the muscle on the left side, and finally into the muscle on the right side, bringing the needle out through the skin at a point opposite to the point of beginning. Two or three figure of eight sutures, as described, may be used. This brings together the muscle and also the skin.

Another method is to put one or more interrupted sutures through the muscle and close the skin and mucous membrane separately. Theoretically it is good practice to put interrupted sutures in the muscle. Practically I seldom use many interrupted sutures. If the work is done aseptically it will hold anyway. If it becomes infected it is a good thing for the patient for the stitches to give way and let the pus escape.

Speedy repair of the average case may be made, after uniting end to end, any torn muscles; by taking a deep bite into the muscle on the left side, always being careful not to include any skin or mucous membrane, then taking the needle across and getting a similar bite in the muscle on the right side. This first stitch is tied and from here on one can sometimes complete the repair, if not too extensive, with a continuous suture; first bringing the muscles of the two sides together and finally the mucous membrane and skin. Put in enough stitches to bring the muscles well together laterally. If the tear is very extensive it is better to use a few interrupted sutures, or make ties occasionally in the continuous suture.

Care should be taken that the stitches are not tied too tightly. It has been suggested that the stitches be tied so loosely as to leave enough room under the stitch in which to get your finger. Of this I do not approve, as the primary object of the sutures is to hold the tissues in apposition.

I do not consider it good practice to put

the sutures in before the delivery of the placenta. On account of the presence of the cord the field may become contaminated and until we have actually gotten the placenta we never know but what it may be necessary to introduce the hand into the vagina and perhaps the uterus, in order to do so. The passage of either the placenta, or the hand may put tension on the sutures.

Formerly I was afraid of getting the needle into the bowel, but many years ago, when at the clinic of Dr. Joseph Price, I asked him in regard to this and he said it was almost impossible to get the needle into the bowel. Since that time this feature of the operation has not caused me much worry, though it is well, after the completion of the operation, to insert the finger into the bowel to see if there is any obstruction from the stitches. In the beginning if there is any doubt about the tear extending into the bowel the gloved finger should be inserted into the bowel in order to be sure as to the extent of the tear. Having ascertained that there is no tear into the lumen of the bowel, put on a fresh sterile glove and do not put the finger inside the bowel again until after completion of the operation.

If it has been necessary to insert stitches near the meatus a catheter, or hemostat, should be inserted into the bladder to make sure that the urethra is patent. This should be done before making the final examination in the rectum.

Except in complete lacerations very little after care, other than that given ordinary labors, is required. In the ordinary repair case the patient should have a daily, soft, evacuation of the bowel. The attendant is instructed about keeping the parts clean on the outside. No douches, or medicines of any kind, other than medicated soap, are used.

After you have sewed it up let it alone. If it does not heal there is nothing much that you can do about it, until the time comes for a secondary repair. Sulfanilamide from the beginning may help keep infection down. If it does become infected the stitches may have to be removed.

I place no particular restriction on the patient as to the movement of the legs. In six or eight hours, in ordinary cases, she is allowed to be helped up on the slop jar for the purpose of voiding urine.

If it is an extensive tear she should remain in bed about two and a half weeks.

There is not a single development, even the most advanced of contemporary medicine, which is not to be found in embryo in the medicine of the olden time.

LOBAR PNEUMONIA*

NAT SUGARMAN, M. D.

Sneedville, Tenn.

Lobar pneumonia is one of the most widespread and dangerous of all the infectious diseases of the temperate zones. Osler in the last century gave this disease the descriptive title "The Captain of the Men of Death." The disease is caused in about 90 per cent of cases by the pneumococcus of which 32 distinct types are now recognized. During ordinary times, Type I is responsible for about one-third of all cases, the other cases being spread principally but irregularly between Types II, III and IV, the Type III being the most uncommon but fortunately so since it carries the highest mortality.

Briefly summarizing the symptoms, we find that it is characterized by the suddenness of its onset, typically by a chill, stabbing pain in the side, high rise in temperature and pulse rate, rapid respiration often with dyspnea, cough with rusty sputum and involvement of the nervous system ranging from mere anxiety to active delirium. Herpes simplex, jaundice, and initial vomiting are frequently seen. There are typical findings in the chest but I will not take the time in this paper to go into that. Cyanosis, varying in degree with the respiratory and circulatory involvement makes its appearance later. In the average case the symptoms last from five to seven days with very little remission when the attack either terminates by crisis or more uncommonly by lysis.

The type and virulence of the invading organism is the modern guide to the outcome of the pneumonia case, the mortality being almost 100 per cent when the Friedlander Bacillus is the causative organism, 50 per cent in Type III, 30 per cent in Type I, 40 per cent in Type II and 10 per cent in Type IV.

Despite recent advances in therapy the resistance of the host is still one of the most important factors determining the outcome of the disease. Any measure which increases the physical or mental comfort of the patient deserves consideration. Too much fussing and measures which promote interference with rest and mental quiet are contraindicated. Absolute bed rest is essential. Energy conserved by avoiding unnecessary movements may be just that amount necessary to save an otherwise fatal case. The patient should be put to rest in a well venti-

lated room, in a comfortable position. Some patients will prefer to lie on their back or on the side while others will feel comfortable, in a Fowler's or semi-Fowler's position. The patient should not be allowed to sit up to use the bed pan or the urinal. Frequent changes of positions are advisable as it rests and relaxes the muscles. Visitors should be few and their stay brief. The bed must be kept clean, warm and dry since moisture favors the development of bed sores. A tepid bath should be given once a day. Frequent sponges are undesirable. The back requires extra care. It should be rubbed with alcohol or a bathing solution and then powder applied. Cleanliness of the mouth is also of extreme importance. The dry, dirty oral cavity furnishes an additional source of potential danger. Moreover, the sense of taste is improved and makes it easier to maintain an adequate intake of fluid and foods. The mouth should be cleaned every two hours with an alkaline mouth wash and followed by the application of albolene to the tongue and cold cream to the lips. A nasal spray such as ephedrine in oil or a simple cleansing solution used frequently is also advantageous. The bowels require special and careful attention. In the early stages a laxative may be ordered. An enema is given every other day or daily. Abdominal distention of a variable degree is a part of the disease picture and is harmful in proportion to the degree to which it limits respiration. It is best treated by prevention. The abdomen should be palpated frequently to detect the earliest trace of distention, and every effort must be made to keep the abdomen flat for persistent tympanitis adds greatly to the respiratory and circulatory difficulty. Distention, if present, is to be combated by the use of enemas, the rectal tube, stipes or poultices and in the more severe cases the use of pitressin or pituitrin may be necessary.

The diet is not essentially important as far as caloric intake is concerned since the disease is of relatively short duration. It should be sufficient in amount to maintain the patient in his fight against his infection. The patient should be fed by the attendant until convalescence occurs. A high fluid intake is desirable and as much as 5000 cc. of fluid given daily. Milk, either sweet or buttermilk, may be given. It may be given plain or flavored, or it may be used in the making of cream soups, custards and ice cream. A quart a day is sufficient. The patient should be fed small amounts of food at more frequent intervals and water offered at such

*Read before the Bell County Medical Society.

intervals. Fruit juices as orange, grapefruit, pineapple, grape, lemonade, at such intervals, are also usually well tolerated. Sugar may be added to these to increase the caloric intake without rendering them too sweet. Coffee may be valuable but not used to excess. Tomato juice, broths and thin soups are also easily prepared and well tolerated. Eggs, either alone or added to the milk or fruit juices are also well used as are soft cereals such as oatmeal and farina. Alcohol in moderation is useful, and small amounts of solid food may provide a welcome and well tolerated change from the monotony of an exclusively liquid diet.

In every case of pneumonia, probably the therapeutic consideration of the greater importance is the conservation in every conceivable manner of the patient's strength. It is, therefore, of paramount importance that pain and mental anxiety be reduced to a minimum. Chest pain resulting from pleurisy is usually relieved by strapping. If very severe and causing considerable restlessness, the opiates may be used for its relief. Diathermy is also useful for its analgesic effect. Cough, if excessive, may be controlled by the administration of codeine, 1-4 grain every four hours. It is important, however, that sufficient codeine not be given to abolish the cough reflex. Restlessness and sleeplessness must be overcome since peace of mind and of the body are of utmost importance to the patient. If the opiates are not used for the relief of pain or cough, they will often be required to obtain daily quiet. Mild sedatives such as barbital, luminal, and amylal may be tried first. Some men report good results in relieving these harrassing complaints by the use of intravenous glucose. The chest must be examined sufficiently often to determine the presence of a spread of the lesion, evidence of fluid in the pleural sac and to determine the functional state of the heart muscle. At such times the patient should not be allowed to turn or raise himself with his own effort.

At times the control of delirium is particularly difficult. If the patient has been accustomed to taking alcohol, it is probably wise to administer it in generous doses. There has been some controversy concerning the use of morphine. Some maintain it decreases aeration, may increase abdominal distention, and itself may be responsible for the confusion and delirium. It should, therefore, be used sparingly. To avoid its depressing effect, chlorate hydrate 15 grains or paraldehyde 30 minims may be administered orally or rectally. In the more severe forms, avertin

has been used by some.

Anoxemia occurs in some degree in practically all cases of pneumonia and is frequently a major factor in the toxemia present with a disorder. This unsaturation of the blood with oxygen is manifested clinically as cyanosis. The exact cause is unknown. Rapid, shallow breathing, circulation of blood through poorly aerated portion of the lung and degenerative changes in the alveolar cells themselves all probably contribute to its production. The manifestations of this anoxemia are cyanosis, rapid, shallow and difficult respiration, rapid pulse, delirium and dizziness. The arterial blood oxygen saturation normally 95 per cent is reduced to 75 per cent. Oxygen is thus definitely indicated and the most preferable way this is administered nowadays is by means of the oxygen tent of which there are many good makes now on the market and in most hospitals and communities, are in daily operation. With the proper administration of oxygen, dyspnea and cyanosis are lessened or completely relieved, reductions in pulse and respiratory rates may be seen and frequently delirium is diminished or disappears altogether. The principal indications for the administration of oxygen in pneumonia are dyspnea, cyanosis, rising pulse and respiratory rate and delirium. For the best results to be obtained, the administration should be started at the first appearance of dyspnea and cyanosis and continued until these features are absent when the patient is allowed to breathe normal room air. The crucial test of a good tent is the degree of comfort that it is able to afford the patient. If the patient objects to the tent in any respect the technique of the administration of oxygen is faulty at some point. If, before starting patient under the tent, the purpose is made clear to him, most unnecessary apprehension and disturbance will be avoided. The optimum concentration of oxygen in the air circulating in the tent is 50 per cent. In the majority, an oxygen flow of 6-8 liters per minute will maintain this concentration. Higher concentrations may be given for short intervals. Some workers prefer tents in which, by soda lime absorption, the expired CO_2 may be removed completely. Most tents are of tank type. Occasionally it may be desired to allow the expired CO_2 to accumulate in the tent to some degree. Henderson believes that the most effective way of inflating or clearing an occluded lung or lobe is the increased depth of breathing induced by the inhalation of CO_2 . The heart in pneumonia must, of necessity, be watched closely. There has been consider-

able discussion and controversy concerning the use of digitalis in pneumonic patients. The consensus of opinion I believe today is that digitalis is given only when auricular fibrillation or congestive heart failure are present. It is the opinion of some that unless it is indicated its use may do harm. However, I have given digitalis in moderate doses, 1 1-2 grain three times a day. It is stated that this amount will do no harm, and possibly may afford better myocardial tone. This is especially true in patients with pre-existing cardio-vascular disease. Should auricular fibrillation occur, the patient should be digitalized but toxic doses must be carefully avoided. Other drugs such as caffeine, coramine, ephedrine and pituitrin may be given when indicated to stimulate in case of respiratory center failure or peripheral vascular collapse. Many men practice giving glucose, 25-50 per cent solutions. Given in amounts of 200-250 cc. twice daily, it is of value in combating the existing toxemia. Too, one of the most obvious advantages of glucose therapy is that it supplies in a short time a large quantity of food material which does not have to undergo a preliminary digestive process. As I have mentioned before, some observers claim that the administration of glucose will also frequently overcome the restlessness and delirium.

Osler in his text book writes "Pneumonia is a self-limited disease and runs its course uninfluenced in any way by medicine; it can neither be aborted or cut short by any known means at our command." Such is no longer true today with the advent of specific pneumococcus anti-serum. Considerable work has been done in the attempt to effect an effective anti-serum to combat such a dangerous disease as pneumonia. Such men as Cecil, Plummer, Cole, Sutliff and many others and really all who have had any amount of experience with specific anti-serum therapy are today convinced of its great contribution and importance in combating pneumonia. Cecil, in a recent article published in the *Journal of the American Medical Association*, writes the following: "Physicians who are interested in public health can now visualize the ultimate control of pneumonia for there is every reason to believe that what has already been accomplished with Type I serum, can be achieved with other types as well. He states that figures are at hand showing that types II, V, VII, VIII and XIV are amenable to serum therapy. Writing further he states, that in the course of time investigators will be able to demonstrate for the other types of pneumonia what can now be proved for type I, namely, that the early and adequate use of anti-pneumococcus serum re-

duces pneumonia to a comparatively mild infection.

One must remember in regard to serum therapy, that the fundamental principle for obtaining beneficial results lies in the early and adequate administration. Cecil, in describing his results in the serum treatment of type I pneumonia states that the disease is reduced from a serious, exhausting infection of 7 to 10 days duration, to almost the status of an influenzal attack. It is recommended that the patient's sputum be typed as soon as the history and the physical findings definitely class the case as one of lobar pneumonia. This may be done just as easily at home as in the best hospital. If at home the sputum of the patient may be brought from the bedside to the office in any suitable clean container like a fruit jar or any other small well cleaned out bottle. The Sabin technic offers the simplest rapid method commonly used. The equipment required is a microscope, three hollow ground slides, three cover slips, a small quantity of Loeffler's alkaline methylene blue, a platinum loop and three tubes containing specific rabbit anti-pneumococcus serum. Pneumococcus rabbit antisera are now commercially available for the identification of pneumococcus type 1-XIV. The Sabin technic is based on the fact that when pneumococcus are brought into contact with a homologous type of rabbit pneumococcus antisera, there occurs very rapidly a swelling, the so-called Quelling in the capsule of the pneumococcus. Sabin states that this appearance is so characteristic that the finding a single bacteria with swollen capsule is sufficient to establish the type of pneumococcus present.

From the standpoint of the antisera itself there have been improvements which have consisted chiefly in the further reduction of substances that have presumably been the cause of serum reactions and in a greater concentration of the pneumococcus antibodies. For therapeutic purposes at the present time antisera are commercially available against pneumococcus type, I, II, V, VII, and XIV and the future will probably provide sera against the other types too. As soon as a satisfactory typing has been obtained, if antiserum is to be administered, it should be begun as soon as possible. Because the common method of preparing pneumococcus antisera is the immunization of horses to increasing doses of pneumococcus it is apparent that evidence in the patient's previous clinical history suggesting serum sensitivity or sensitivity to horse protein should be carefully sought for. The presence of pulmonary edema, shock or a state of extremis are contraindications to the use of

serum. Sensitivity to horse serum as shown by positive skin or conjunctival tests as well as the history of previous injection of horse serum has also contraindication. The latter two may however, be disregarded in certain cases if desensitization is carefully accomplished. Sensitivity may be tested by the injection of one or two drops of the antisera into the conjunctiva or into the dermis. In the former position if the patient is sensitive, conjunctival hyperemia, and edema with lacrimation occur within a few minutes. In the latter position local hyperemia, edema, and itching indicate that the patient is serum sensitive and serum cannot be administered until he has been desensitized, and this may be accomplished by injecting, 5 cc. of the serum intramuscularly and doubling the amount every half hour until a full dose has been given, subsequent treatment may then be given usually without difficulty. When one is assured that serum sensitivity is not present the serum is injected and is ordinarily administered intravenously. Because of the immediate reaction that may occur during or shortly after injection of the antiserum, adrenalin should always be available and ready in a syringe before treatment is started and its use indicated by the developing of wheezing, cyanosis, collapse.

The amount of serum varies with the individual case. As a rule for the proper treatment of a case of type 1 with the specific serum from 100-200 thousand unit of serum are necessary. Larger amounts are generally necessary in type II. Also in patients with persistent blood stream infection of spreading consolidation more may be necessary. The serum may be given in divided doses at two to four hour intervals or it may be given in large doses repeated at 24 hours intervals as necessary. It is probably best to dilute the serum either with glucose or saline 1:10 and give by slow intravenous. However it may also be given undiluted but in this case the slowest possible rate of injection is the best. Serum sickness occurs in about 1-3 of the cases and usually occurs about the tenth day. For this reason it is always wise to advise the patient and the family about the possibility of serum sickness occurring. Adrenalin .3-.5cc. will usually relieve the symptoms. It is believed by some that adequate catharsis and calcium lactate .5 gm. four times a day are of distinct value in preventing this phenomena.

Very striking symptomatic relief usually follows such specific therapy. Drop in temperature of one or four degrees is frequently seen. There is a lessening of dys-

pnea and cyanosis and a clearing of the confessed mental state. These beneficial may be seen at times as early as 6-24 hours after the beginning of serum to therapy. There is also some evidence that serum therapy favors resolution. Bacteremia is prevented or if present is quickly checked. Cecil in his recent article reports the following figures. Of 1494 cases treated with serum there was a mortality of 15.7 per cent as compared to a mortality of 33.6 per cent in 565 cases not treated with serum. One cannot help but be impressed with such figures especially when numerous other clinicians have consistently reported equally astounding results. In the May 1st issue of the A. M. A. Journal there is a report on the use of rabbit antipneumococcic serum in the treatment of pneumonia. The authors believe that the rabbit serum is as effective as the concentrated horse serum in the treatment. In rabbits they claim it can be more readily and easily produced, that it is not as expensive as that obtained from the immunization of horses. They claim too that they have evidence to show that the rabbit antibody can penetrate the pleura and assist in the sterilization of an infected exudate. Horse on antiserum does not reduce the incidence of empyema and once the pleural fluid becomes infected no amount of horse serum will affect the subsequent course of the exudate.

In closing I want to mention one more point. That is the treatment of pneumonia by means of artificial pneumothorax. This began quite accidentally when lung punctures were being done for bacteriological purposes during the influenzal pneumonia epidemic of 1918. The spontaneous pneumothoraces which sometimes ensued prompted several patients to request further similar treatments and as the result of this artificial pneumothorax was instituted deliberately in three patients, who were considered moribund. Two recovered. What is true of specific therapy is also true of artificial pneumothorax, that is, to be effective it must be used early. Such treatment has not been sufficiently studied so far to form any definite opinion as to its value.

ADDENDA

Since this paper was first read, a considerable amount of work has been done with the use of sulfanilamide in the treatment of pneumonia—and more recently, Butesh investigators, report promising results with the use of M & B 693. This latter product as yet is not on the American market, but will appear shortly.

THE MANAGEMENT OF OBESITY*

GAVIN FULTON AND EDWARD C. HUMPHREY
Louisville.

Obesity is not a disease entity, but rather a symptom complex. It may be exogenous or endogenous and is the result of some disorder of metabolism or, a dysfunction of one or more of the glands of internal secretion. The successful management of obesity entails a thorough knowledge of the etiology, complications and other extraneous factors which may influence the prognosis and treatment of the individual case. With the exception of certain endogenous types, obesity is found more often after the fourth decade of life, than during the earlier years of development. The condition appears more frequently in women than in men because in the former, the percentage of hemoglobin is lower with a consequent reduction of oxidizing power, and foods are more likely to be stored than burned.

Heredity undoubtedly plays some part in the etiology. The children of the over privileged inherit certain traits and characteristics which are further enhanced by the standard of living to which they are educated. Their foods are more concentrated and highly seasoned with resulting increase of energy intake over output, from which a progressive over weight gradually occurs. Environment and mode of living are probably the outstanding factors in exogenous obesity. As men prosper and acquire greater financial ease their tendency is toward relaxation, over indulgence of all appetites and lessened physical exertion.

The majority of all cases fall in this group, wherein overeating is the prime factor. Quite a few of the patients are more or less anhedonic, as has been suggested by Myerson, and are supremely unconscious of their dietary errors. They are unstable and neurotic in their outlook and are constantly nibbling at this and that as a defense against their feelings of unrest and dissatisfaction with things in general. Other causal factors in obesity are certain constitutional diseases and the metabolic deficiencies arising from some disturbance of the endocrine system. In the former group, cardio vascular, renal, gall bladder disease and diabetes are among the exciting causes. As to disadvantages of obesity Joslin has said that the price of obesity is diabetes. The surgeon is aware of the increased hazard of infection in those cases where marked over weight is present.

The pathologist also is familiar with the deplorable state of the myocardium in the obese. It is found to be infiltrated and surrounded with fat. The muscle tone is greatly diminished and in parts completely degenerated with a resulting loss of power until the organ can no longer fulfill its function and dissolution occurs. This impairment of the heart's action is usually accompanied by restricted diaphragmatic movement because of the large masses of omental fat pushing against the abdominal wall.

There is often seen a slowing up of mental processes in the obese subject. He is inclined to follow the line of least resistance. He is good natured and slow in his movements because of an unwillingness to exert himself in an effort to resistance or combativeness. He tires easily and derives his recreation and amusement from such sources as require little or no effort on his part. In fact, he reverses the old adage and believes that it is far better to receive than to give.

In those cases of endocrine origin, the thyroid pituitary, and sex glands are most commonly at fault. The clinical picture of hypothyroidism, myxedema, Frolich's syndrome, and the basophilic adenoma of Cushing are outstanding examples of this group. Impairment of water balance with a consequent retention of water has been suggested by some authors as a water retention obesity. It is said to be the result of a hyper activity of the water hormone which is a constituent of the hormones of the posterior lobe of the pituitary. And lastly may be mentioned the adiposity which so often occurs after pregnancy and at the menopause. These cases are gonadal in character but are usually accompanied by thyropituitary dysfunction.

Before instituting any plan of treatment of obesity, a complete history should be obtained and each patient subjected to a rigid physical and laboratory examination. All deviations from the normal should be noted and evaluated. A basal metabolism sugar tolerance, blood and urine analysis, specific dynamic action of proteins should be made and when indicated x-ray of the sella turcica should be included in the record. In the treatment of obesity, the major lines of attack are diet and exercise with drugs and physical therapy as adjuncts.

The dietetic treatment of obesity has for its object, the forcing of the organism to burn excess of fat by the restriction of the caloric content of the food. In restricting the caloric contents of the food, one must first recognize the caloric needs of the sub-

*Read before the Kentucky State Medical Association, at Louisville, October 3-6, 1938.

ject, based upon his normal weight-height ratio instead of his obese weight-height ratio. The average caloric requirement of a normal individual is from 30 to 32 calories per kilogram. Hence the food intake in a given case should supply from 20 per cent to 40 per cent less caloric value than is required under normal conditions. The distribution of the foods is of no less importance than the caloric value.

The minimum protein necessary for repair should not be exceeded and meat is the most satisfactory source of supply because it gives a greater sense of satisfaction. It is rather generally agreed however, that over feeding of meat will produce a negative nitrogen balance and more nitrogen will be excreted than is taken in, unless the carbohydrate is also increased. The carbohydrate contents of the diet should be only sufficient to insure proper combustion and should be given mostly in the form of vegetables and fruits and the fat as low as safety will permit. In the average case, a diet containing 80 gm. protein, 120 gm. carbohydrate and 20 gm. fat will be a satisfactory beginning and this can be reduced or increased at the weekly visits, when necessary, in accordance with the weight loss, urinary findings and general condition of the patient.

Attention should also be paid to the vitamins in the food and the necessary balance assured. An example of such a diet with instructions to the patient is as follows:

Breakfast: 1 serving fruit, 1 egg (S. B. or Poached or Scrambled—without fat, 1 slice whole wheat bread (toasted if desired,) 1 cup skimmed milk, coffee or tea (if desired) Saccharine.

Dinner: 2 oz. lean meat (fowl, beef, veal, lamb, internal organs or non-fatty fish,) 2 cups 5 per cent vegetables or 1 cup 10 per cent vegetables, 1 slice whole wheat bread, 1 1-2 serving fruit, D'zerta, 1 cup skimmed milk or buttermilk, coffee or tea (if desired), Saccharine.

Supper: Beef or chicken broth, 2 oz. lean meat, 2 cups 5 per cent vegetables, or 1 cup 10 per cent vegetables, 1 slice whole wheat bread, 1 1-4 serving fruit, 1 cup skimmed milk or buttermilk, coffee or tea (if desired,) Saccharine.

GENERAL RULES

1. No food is to be eaten except that included in diet above.
2. The fruit can be served as dessert or as a salad or both.
3. If desired part of vegetables can be made into a salad.
4. 1 oz. lean meat may be substituted for the egg at breakfast.

Diets should be translated into kitchen language and divided into measured portions. For bulk and a greater sense of comfort, it is well to add boullion and bread substitutes between meals. Many patients will tolerate various reductions in food over a long period with comfort. Others are not so satisfactory and complain of the feeling of emptiness and hunger and in these cases we have followed Myerson's suggestions in regard to those nervous patients with anhedonia. He described this condition as "A symptom complex which consists in a diminution, even to the point of disappearance, of satisfaction normally obtained from life activities and in a loss or distortion of the appetites and desires." As many of the obese present a neurosis of varying degree, it would be wise to consider this anhedonic state in all cases.

Benzodrine sulphate is a sympathetic stimulant, it relaxes the spasm of the gastro intestinal tract and decreases the gastric secretion and increases its acidity. It gives a sense of increased energy and acts as a detergent to the appetite. Based on these premises it should be found beneficial in some of these cases. It was given in doses as follows, 7.5 mg. before breakfast, 5 mg. at noon and 2.5 mg. at 5 p. m. This dosage was gradually increased from time to time when necessary. No harmful effect was observed and recently we have made its use a routine part of our treatment and find that our patients are much more tolerant of their diet restrictions while taking the drug.

Regular systematic exercise must go hand in hand with the diet in all cases where no contra indications exist. Walking upon the turf, particularly where the terrain is undulating in character, is the most satisfactory form of exercise and patients should be encouraged to walk a minimum of a mile a day, either continuously or in relays. Extremes of fatigue slow up metabolism, hence if the patient tires easily, he should rest reclining for one hour after each period of exercise. While thyroid is not indicated in those cases with a normal basal rate, it is of value later in the treatment. It frequently happens after several weeks, that the poundage reduction slows up or ceases entirely and at this time the addition of one to three grains of thyroid daily can be used to advantage.

In those cases which have a low sugar tolerance and a low blood pressure, anterior pituitary solution given parenterally in one cc doses three times a week seem to be of some value. Having arranged the diet, exercise ratio satisfactorily, the urine should be

examined weekly for acetone, and small doses of soda bicarbonate given daily if indicated. When the acetone persists the carbohydrate content should be increased in order to increase the combustion of fat.

The blood pressure should be taken at regular intervals and the cardio circulatory system examined from time to time. During the earlier days of a greatly reduced diet, the patient may be much distressed with dyspnoea and this symptom can usually be relieved by small doses of digitalis (30 minims) three times a day for several days. As a rule, the greatest complaint the patient has, is that the loss of weight is too gradual (from one to two pounds a week) and he feels that he is making no real progress. In order to boost his morale under these circumstances, we usually change to a banana and skimmed milk regime for ten days which gives him a more rapid drop for the time being. This diet was devised by Harrop, and was reported in the American Medical Association Journal in June, 1934. It consists of six over ripe bananas and four glasses of skimmed milk daily, giving a value of 940 calories, divided as follows: carbohydrate 182, protein 44 and fat 4 grams each, such a diet generally causes a loss of about 5 pounds in 10 days. In the October number, 1934, of the Missouri State Journal. Howard Rusk, advocated a high protein, high potassium diet, which we have used to advantage on several occasions. In a case of ascites, he was able to control the patient's weight for nine months by giving 4 grams of potassium chloride with a high protein, low sodium, acid ash residue diet. His diet which approximates a 1,000 calories is as follows: High protein, Low Caloric Acid Ash Diet. Breakfast:

- 1 serving fruit
- 2 eggs
- 1 slice whole wheat bread, 2 1-2 inches by 2 5-8 inches by 1-2 inch.

Coffee with saccharine and 2 tablespoons skimmed milk if desired

Lunch:

Veal outlet, one piece 6 inches by 4 inches by 1-2 inch, or 2 veal chops or lean round steak, one piece, 4 inches by 3 inches by 3-4 inch, or 2-3 cup ground lean beef, or 2-3 cup sweetbreads, or calf liver, 4 1-2 slice, 2 inches by 3 inches by 1-4 inch, or 1 1-2 pieces fish 4 inches by 5 inches by 1-2 inch.

Boil these meats with mineral oil.

1 serving vegetable

Salads:

- 1. Hard cooked egg (one)
- 2. Cottage cheese: 1-4 cup

3. Vegetable salad; if this salad is selected add 3-4 cup broth to this meal. Serve salad on 3 lettuce leaves with mineral oil dressing.

Make dressing by using your favorite French or mayonnaise recipe, substitute mineral oil for salad or olive oil, and potassium chloride for table salt.

1 serving fruit

3-4 cup skimmed milk or skimmed butter-milk.

Dinner:

3-4 cup broth or jellied broth

Roast veal, lean beef, chicken, turkey or lamb

2 1-2 slice 4 inches by 4 inches by 1-8 inches

1 serving 5 per cent vegetable

Vegetable salad with 3 lettuce leaves and mineral oil dressing

1 serving 10-15 per cent fruit

3-4 cup skimmed milk or skimmed butter-milk

1. Eat nothing that is not on diet list
2. Do not use citrus fruit oftener than once daily; better to omit entirely.
3. Do not use fats in cooking. Mineral oil may be used.
4. Substitute potassium chloride for salt in cooking and seasoning.
5. Do not take any alkaline medicine as sodium bicarbonate.

6. Limit fluid to 7 cups 3-4 full daily, including liquid consumed with meals.

7. Do not eat foods canned with salt.

Occasionally, one finds a case of even simple obesity which yields most reluctantly to dietary measures alone and it becomes necessary to resort to other agents to reinforce our previous efforts. We know of no drugs which are at the same time helpful and safe in this use. A year or so ago dinitrophenol was widely heralded, both in the medical and lay press. Long after the experiment of Tainter and Stockton, and Cutting, proved it of doubtful value and entailing many dangers ranging from death to blindness, the patent venders still shouted its virtue from the house tops without mentioning its dangers, through the press and over the radio. So far as we know, thyroid and pituitary extract, still affords us our greatest help in these cases where diet alone is insufficient. In patients with a low blood pressure and basal metabolism at zero or below, thyroid is of great assistance and should be given in doses of one to three grains three times a day. The blood pressure and pulse should be constantly observed and treatment stopped upon the appearance of any symptoms which

might arise from thyroid medication.

Exercise also should be less active at this time because of the increased tendency to fatigue engendered by the heightened metabolic rate which usually results from thyroid medication. In those instances where for any reason, thyroid is contra indicated, anterior pituitary has been found to be of value. Give in doses of from one to five grains three times a day. It increases the circulation and seems to heighten katabolic processes.

It also has the advantage of being well tolerated and can be given indefinitely without injury. When the desired weight is at last attained, the daily dose of pituitary over a long period, serves as a constant reminder to the patient of the lesson in dietary continence which you have endeavored to teach him. And now, just a few words in regard to the nostrums which fill the magazine pages of every issue. We are all familiar with the one which reads something like this: "Eat what you want and grow thin, no restriction of diet. Mr. Black lost forty pounds after three weeks use of our treatment." If such were true, the result could only be obtained by the maximum toxic doses of thyroid, dinitrophenol or kindred drugs which in no sense could be acclaimed as harmless. Again, the many advocates of the predominating citrus fruit diets containing a great paucity of protein and an improper carbohydrate fat relationship, take no cognizance of the danger of such a food to the anemic, tubercular, or cardiac patient. And lastly, the popular Hay diet, which has as its basis the separation of the food elements and consists in never feeding but one kind of food at a time, thus one meal should consist of protein entirely and another must confine itself strictly to carbohydrate and so on. Personally we do not know how this could be accomplished or what value could accrue therefrom if we could. We agree with Dr. Martin Rehfuess who said in a recent discussion of the subject: "There is no evidence either in the literature or in our own investigation to lead us to believe that proteins and carbohydrates are incompatible in the stomach, the unqualified acceptance of such a teaching can only lead to the occurrence of serious malnutrition as well as to the lighting of tuberculosis and old infections."

In conclusion he approves of the statement of Miss Huddleston who suggests that the Hay diets could more appropriately be called the hay wire diets.

There can be no question that we have placed too much emphasis on basal-metabo-

lism. What we mean is this: We often find persons who are over weight and who are gaining weight without being heavy eaters. We anticipate finding a low basal-metabolism and instead find it normal. The point here is that while the basal rate is normal the total metabolism (which is after all the important thing) is low. In other words they do not expend an average amount of energy, and this may be true even when they seem very energetic, because when not actually doing something they are quite relaxed.

Another point: One sees a great many people who in seeking to reduce omit one meal a day, frequently lunch. They feel very proud of this but actually this is a poor way to reduce, because they are ravenously hungry by the time dinner time comes, and actually eat enough for two meals at once. It is better to eat three moderate meals, and indeed some men have advised a glass of milk in mid-morning and mid-afternoon to take the edge off a keen appetite.

Lastly we want to make a point of great practical importance. Newburgh showed several years ago that if a person is deprived of food they do not at first lose weight at all. This is because they retain water to make up for the tissues being burned. After several days they have diuresis and within perhaps 24 hours lose several pounds. Then for another period they do not lose, and then again they have a diuresis. In brief their loss in weight is definitely step like instead of progressive. The importance of this is as follows: Persons placed on a reduced food intake must be cautioned that weight loss will not be immediate, and that they must not be discouraged and give up, because the returns for their efforts will soon come. In our opinion the reduction of salt and water intake is unnecessary. It will speed a very quick reduction (as when a prize fighter seeks to come down rapidly) but the salt and water content of our bodies is something which nature automatically adjusts, and which will tolerate a disturbance only a short time.

In closing we would recapitulate as follows: The successful reduction of over weight demands a properly balanced diet of sufficiently lowered caloric value to compel the patient to draw upon his fat reserve to supply some of the energy requirement of his metabolism; to increase the metabolic demand by regular and sufficient exercise; to avoid the toxicity of fatigue by regular hours of rest; and lastly a re-education of his gastronomic habits and impressing him with the inevitable price of over indulgence in food.

DISCUSSION

R. Hayes Davis, Louisville: Drs. Fulton and Humphrey have presented one of the most important subjects that flesh is heir to, owing to its frequency. Every physician is familiar with the serious consequences that can occur from overweight, and every physician is also familiar with the extreme difficulty that he has in controlling patients and reducing their weight.

Before taking up some of the subjects in this paper I should like to mention what is meant by overweight. We have an average scale that has been based on hundreds of thousands of cases. Naturally, very few people weigh this average. Those weighing ten per cent above or below are considered ideal; those weighing within the twenty per cent limit are considered satisfactory, but those weighing over twenty per cent often have a dangerous condition, because the statistics have shown that people weighing over twenty per cent of this average are susceptible to various pathological changes in their organs that are almost certain to lessen their life expectancy. So this is an extremely important condition, and yet we are confronted with a problem that is most difficult to manage. Of course every patient who presents himself must be shown, and it should be explained to him, that his life expectancy will certainly be lessened if he does not reduce his weight within the proper limit.

The most important treatment for overweight is the dietetic treatment, but this dietetic treatment and the reduction in weight must be carried out with great caution. It was pointed out many years ago that it is very dangerous to reduce weight after fifty years of age. It is particularly dangerous if these patients have any myocardial degeneration or any other organic diseases, and each patient after the fourth decade of life should be particularly studied for organic heart disease before attempting to reduce his weight. If he does have organic heart disease and if it is necessary to reduce his weight for therapeutic purposes, then it should be done most carefully, and particularly in reference to exercise, because a reduction in weight is likely to lower his vitality temporarily, and exercise should be greatly limited and most carefully watched.

My method of figuring the diet for these patients is practically the same method that is used in the treatment of diabetes. One can easily figure out the calories that the patient requires, the proper percentage of carbohydrate, protein and fat, to secure a proper balance, and add to this the maintenance requirements according to the amount of exer-

cise he takes, and then reduce the whole caloric content of his food to about two-thirds of his requirements, keeping the protein normal and making the caloric reduction by lowering the carbohydrates and fats. This is practically safe in most cases. Sometimes it is necessary to go below two-thirds of the requirements, and of course that will have to depend upon his loss. I think in the average case a loss of about one to two pounds a week is comparatively safe, and the younger the patient is, of course the better he can stand this loss.

Another very important point is the fact that almost invariably when a patient goes on a reducing diet he does not lose at first because there must be a readjustment of his body fluids. In many cases he stores up water and there is no loss in weight for at least ten days to two weeks, or he may actually gain a little, and then he loses rather quickly. This is particularly shown in the treatment of diabetic cases. Many of these patients when they are put on a diabetic diet and their sugar balance is secured, will store up a lot of fluid and actually become edematous. I have seen quite decided edema follow the balancing of the carbohydrate metabolism, and after a little while the edema almost invariably disappears, the fluid balance is readjusted, and the patient returns to a perfectly balanced fluid condition.

The dangers of reduction have already been pointed out. The principal danger, of course, is the effect on the heart, and this should be carefully watched and in people over forty years of age I think electrocardiographic tracings are extremely important, because nothing is more embarrassing to a physician than to tell a patient that his heart is perfectly normal and to have him drop dead a few weeks later, and that not infrequently happens. With very careful studies and electrocardiographic tracings, usually myocardial degenerations can be discovered before some serious result takes place.

In the use of drugs, the most important is unquestionably thyroid, and I do not think the basal metabolism test is at all times an indication for the use of thyroid. If we have patients who present symptoms that are indicative of hypothyroidism, and there are certainly many of these, particularly women about the menopause, then it is well to try them on small doses of thyroid to see the effect rather than to depend entirely upon the basal metabolism test. It can easily be determined whether thyroid is beneficial or not, because these patients feel themselves a great improvement if they need thyroid. If they don't need it or if it disagrees with them, they also know it very quick-

ly and the physician knows that he can stop it. If the basal metabolism is low, of course that is a definite indication, but in many cases, with a normal basal metabolism thyroid may be given with very satisfactory results if it is carefully watched.

In regard to other drugs, these depend very largely upon the endocrine basis that is back of so many of these cases of obesity. Of course the type that occurs from overeating is by far the most frequent, but everyone meets with a certain number of cases, and particularly in young people, who are very excessively fat unquestionably due to some endocrine disturbance, and these cases are particularly hard to reduce. In them, of course, the type of endocrine therapy must be used that is particularly applicable to that particular case, and oftentimes it requires a very careful study and even with the greatest possible study and with the greatest effort these cases are most difficult to reduce. Fully 95 per cent of the individuals who are obese have this obesity on account of overeating, and if their diet can be properly corrected and if their exercise can be properly adjusted, they will lose weight, but I do not know of anything more discouraging, because I would say the vast majority of them, even if they do lose weight, will in the course of time resume their former bad habits and gain it again, so it requires a constant effort on the part of the physician to keep them within proper bounds.

Frederick G. Speidel, Louisville: I wish to devote the time I expect to take up in this discussion to a general consideration rather than to any specific suggestions as to the manner of reducing the obese. I wish particularly to discuss the widespread belief that there are two kinds of fat persons. The first kind of fat person is the one who is fat because over a period of years he has eaten more food than is necessary for his body needs. Then there is considered to be the second class of fat person whose overweight bears no relation to his intake of food and his output of energy, but is said to be due to some endocrine, constitutional, or hereditary anomaly.

There is overwhelming evidence to indicate that overweight is always due to an intake of energy in the form of food in excess of the output of energy in the form of work and heat and various forms by which energy is dissipated.

The normal person unconsciously provides his body with sufficient amount of nourishment and energy to meet his needs. He has a finely adjusted mechanism consisting of hunger and a feeling of satiety which dictates to him when he should eat and also dictates to him when he should stop. What is exceedingly important in such a normal individual is that

when he receives the impression of satiety he does stop. The obese person, on the other hand, responds to hunger sensations earlier than does the normal person and responds to the sensations of satiety much later, wilfully, frequently, in order to prolong the sensuous pleasure of eating, and thereby he dulls the very valuable sensation of satiety which should cause him to stop eating.

Some young people, some children, are induced to dull the acuity of this sensation of satiety by encouragement from their overfed elders, and such persons are said to suffer from hereditary obesity.

As to the obesity that occurs in middle age and is referred with so much assurance to an endocrine imbalance, that also is due to the taking in of more energy in the form of food than is dissipated in the form of work. Eating habits are retained that were necessary during the stress and strain and worry and anxiety of younger years, but by the time a person has led an adult life for twenty-five years, his family has grown up, the children are away from the home, he has frequently achieved some measure of success and prosperity, he has servants, an automobile where in previous years neither was present, and he or she has acquired considerable skill in dealing with the ordinary activities and requirements of life, and that acquisition of skill has made it necessary to expend less energy on a given task than had been expended heretofore. The result of all of these things is that less energy is used and dissipated and if exactly the same eating habits are retained, obesity will inevitably result.

As to the persons with low basal metabolic rate or low total metabolism for the day, if those persons are obese—and they are not all obese, it still means that they are taking in more food than is necessary to meet their daily needs in the form of energy. When we are confronted by that problem our task as doctors is not to reduce their diet so as to make it conform to their abnormally low metabolic needs, but to increase their metabolic needs so as to correspond to what is considered a reasonable food intake, and that can usually be done very satisfactorily by the administration of thyroid.

In conclusion I simply want to leave this thought, that there is nothing mysterious about a fat person, there is nothing supernatural about obesity; they do not manufacture fat from the air they breathe nor from the water they drink nor from nothing at all, as some of them would have us believe; they manufacture fat from an excess of food. The law of the conservation of energy holds good in physiology and in medicine as it does in all other sciences, and if we can keep that fundamental concept in our minds when we are called upon to treat obesity we will avoid many pitfalls.

Edward C. Humphrey, (in closing): Having tried to attack obesity, I want to say one word in its defense, and that has to do with hypoglycemia. I once saw a patient, when I was intern, who had been thought by the neurologists for about two years to have epileptic attacks, and it was later demonstrated that this man had acute attacks of hypoglycemia and went into hypoglycemia shock with convulsions. That man, to avoid these attacks, had eaten so much that he was considerably overweight. A tumor of the pancreas was removed in that case and he was all right. I think in between that and normal there are many cases, and there unquestionably are people who feel better when they are somewhat overweight than they do when they are normal weight, feel better all the rest of their lives. Some of those people certainly, if their blood sugars were taken, would be found to have a hypoglycemia which gives them a chronic feeling of fatigue and in order to keep the sugar content in their blood up to normal they have to eat an amount which renders them overweight. I think for such people we must have entire sympathy; I mean it is probably better to be overweight and have a normal energy than to be of regular weight and not have it, even though you live a little less long. It can be helped by frequent feedings of small amounts of sugar; by their eating candy between meals you can tend to keep that sugar level in the blood up nearer normal without their gaining too much weight, but that is a sort of obesity that I feel there really is some defense for.

Appendicitis at the Jameson Memorial Hospital.—Flannery studied the records of the 440 patients discharged from the Jameson Memorial Hospital in 1935 and 1936 with a final diagnosis of appendicitis. Twenty-three patients were not operated on. Twenty girls and women were submitted to operation for gynecologic diseases and the appendixes were removed incidentally and in one adolescent male an appendix was not found. This leaves 396 cases of appendicitis in which operation was performed. The records show that 69.4 per cent of the patients were between 11 and 30 years of age. There were 60.2 per cent women and girls and 39.8 per cent men and boys in the group. The average time that elapsed from the onset of the acute attacks until hospitalization was 34.8 hours.

HEADACHE*

C. F. LONG, M. D.

Elizabethtown.

In writing this paper on headache which is a symptom and not a disease it was determined to only try to consider the most common everyday sort of headaches that the general practitioner comes in contact with. Headaches may be considered a painful condition of the head. There are as many types of headache as there are types of patients. But to classify headache we must narrow this group of types down to a few to really understand them. In my practice as a general physician I consider the following types of headache.

(1) Local Types: As actual organic, intracranial diseases, as traumatic conditions, inflammatory, vascular, etc. These conditions may be further classified as brain tumor, abscess, hemorrhage, thrombosis, arteriosclerosis, meningitis, encephalitis, syphilis, concussion, etc.

(2) Reflex Types: That is condition outside the brain, but causing pain in the head especially as third stages lues of the skull, osteomyelitis of skull, rheumatic conditions, tonsillitis, carious teeth, adenoids, nasal polypi, iritis, glaucoma and other inflammatory conditions of the eyes.

(3) Toxemias: These may be infectious as in malaria, typhoid fever, Metabolic as in uremia, diabetes, or goiter. Chemical or poisons as in drug poisoning of quinine, alcohol, carbon monoxide, lead, etc.

(4) Circulatory Disturbances: As in passive congestions, active hyperemia, or anemia.

(5) Neurosis: As in epilepsy, hysteria or neurasthenia.

(6) Migraine: Or hereditary headache with its associated symptoms.

The nerve supply of the meninges accounts for the frequency of headache in disturbances of other organs of the body. The falx tentorium and anterior three-fourths of the dura is derived from the fifth nerve; the remaining fourth receives its supply from the pneumogastric nerve. The scalp as far back as the vertex is also supplied by the fifth nerve; the posterior part is supplied by the upper four cervical nerves; the pia receives branches from the third, fifth, sixth, seventh, ninth, tenth and eleventh cranial nerve.

*Read before the Kentucky State Medical Association, at Louisville, October 3-6, 1938.

In all cases of chronic headache a careful search must be made for the causes. Frequently the type of headache and characteristics it presents aid greatly in the diagnosis as to the cause.

The pain may be pulsating or throbbing, hot, burning or sore, boring or sharp. In location it may be frontal, occipital, parietal, temporal, vertical or diffuse. A heavy dull frontal pain is often due to toxemia of some sort. The feeling as if a band were about the head or feeling of pressure on top of the head is usually evidence of a nervous type of headache. The pain will be made worse by exertion or excitement. The sharp boring type of headache will be found in the hysterical or neurotic patient.

Headache due to eye strain is a very common one seen by all doctors. We must not forget the eyes and inquire very carefully as to whether the pain comes on after the patient is up and using the eyes especially if made worse by reading or doing work that requires close attention.

I frequently have truck drivers that come in for headache due to eye strain. This pain is usually over the orbits along temporal regions and back to the occiput. Inflammatory conditions of the eyes and glaucoma also cause a very severe headache, in glaucoma the pain is usually temporal. When due to inflammation of the nose and sinuses, especially the frontal, the pain appears after rising and gets better toward evening. Made worse by bending over or jarring the head. The location is frontal but may involve the whole head.

If due to syphilis the pain is sometimes only present at night and always much worse at night. When the local causes of headache are suspected local areas of tenderness should be looked for. Generalized headache may be a symptom of many different diseases and is not of much value in diagnosis unless there are symptoms of other intracranial involvement.

Localized headache may indicate the region of involvement and is usually of diagnostic value. In brain abscess for example, the tenderness may be directly over the abscess.

In general, however, no hard and fast rules may be laid down for the group of organic brain disorders. In brain tumor, the headache may or may not be of value in localizing the tumor. There is, however, a persistent headache usually of a diffuse character in brain tumor and if a patient returns after repeated examinations and the cause for the headache cannot be found we must bear in mind, brain tumor. The great trouble with

most of us doctors is that the condition must be too apparent before we find it or are willing to admit that we can't find the cause. Let us not delay too long having an X-ray and neurological examination of patient that complains of headache over a period of several weeks.

In most of the acute diseases, there is a severe headache which improves rapidly as the acute disease subsides. If a patient continues to have a headache with stiffness of neck, of course we must look for meningitis or some other acute condition of the brain.

In hypertension with arteriosclerosis headache and dizziness is one of the first symptoms that calls our attention to that condition. There are many other local conditions of the head and brain that cause headache but we are only mentioning the most common type found by the average general practitioner.

(2) Under the Reflex Type or conditions outside of the brain that cause headache we will mention tonsillitis, adenoids and nasal polypi as very common causes of headache. Of course the inflammatory conditions of the eye, as iritis and glaucoma cause very severe types of reflex headache that are characteristic of those conditions.

(3) The Toxemias are very prominent causes of headache. Most of the infectious diseases have headache as an important symptom. Headache is a very prominent symptom of Typhoid Fever, but in our modern day of sanitation and vaccine therapy, typhoid is almost a thing of the past. There is usually a severe headache in malaria, but in our community, there is very little malaria. In cases of kidney disfunction as in uremia, our patients complain of a heavy dull headache that is only relieved by proper treatment of the kidney condition, which is more often fatal, than relieved.

Headache in cases of diabetes, regulation of the diet gives very gratifying results.

In the winter time when mechanics are working in closed garages that are not well ventilated, we see many of them complaining of a dull drunken feeling of the head. We must warn our patients of the danger of carbon monoxide poisoning.

(4) Circulatory Disturbances that cause headache passive congestion caused by tight clothing about the neck, as a tight collar. I am sure most of us have started out in the morning feeling fine until we put on a shirt with collar that was about one number too small, and by noon, have felt miserable by a diffuse headache. Diseased right side of heart causing passive congestion will cause a full throbbing headache. Other conditions

such as emphysema of lungs which cause passive congestion, may be the cause of headache.

Anemia is a very common cause of headache and improves rapidly by proper treatment of the anemia.

(5) In considering the headache of the Neurotic, it would fill a good sized volume. I am sure that you all have had the nervous patient to come in to see you several times complaining of headache in the neck and up over the top of the head. After examination and doing what you considered best for the patient from a general standpoint you notice that this particular patient is absent from your office only to learn that patient has been cured of the headache by a sympathetic chiropractor.

Let us not be too hasty to say your headache will get better as your nerves quiet down. Let us do something to relieve this great army of neurotic patients. The medical man is losing many patients to the other practitioners because of the unsympathetic attitude we take.

(6) In considering migraine as cause of headache we must be prepared to delve into the heredity and background of our patients. It is a constitutional neurosis associated with sudden attacks of headache usually on one side accompanied by nausea, vomiting, sensory and motor disturbances and by mental depression. Usually occurs early in life. For a few hours to a day before an attack, there may be the feeling that the patient is in for an attack.

The pain is made worse by noise, light or bending over, the face is usually pale and legs and arms are cold. Some patients have an aura of seeing spots or lights before the eyes. After the pain has lasted several hours nausea and vomiting occur with relief of the pain soon after. There may also be symptoms of paralysis on one side. Other conditions that should be differentiated from Migraine are: Headache due to other causes, neuralgia, transient paralysis without headache, crises of tabes. In the treatment of Migraine, rest, quiet, to keep the bowels and stomach in good condition. I will only mention one newer drug, Ergotamine Tartrate or Gynergen that has recently come into use for Migraine. I have only used it a few times and am not able to say from experience, what benefit may be derived from its use, but I found it mentioned favorably in the literature for treatment of Migraine. The dose—5 milligrams, subcutaneously or intravenously gives relief in fifteen to thirty minutes, given orally in dosage of one to two

milligrams and relief is obtained in thirty to ninety minutes.

Treatment of headache in general, we should give the patient the benefit of a thorough examination, looking especially for bad teeth, tonsils, adenoids, defective vision, infected sinuses, worry, nervousness, gall-bladder and liver conditions. It is well to remember hypertension, acidosis and toxemia in general, cause headache. If after a thorough examination, we do not find the cause, it may be well to call in the eye man, or neurologist. Certainly if we look well, we will find a lead to work on. What the patient is interested in usually, however, is relief, while we are looking for the cause. Some combination of acidi acetyl-salicylica with phenacetin and caffeine, will give relief in many cases. Some require codeine and occasionally a hyperdermic of morphine.

We must guard against giving morphine, as much as possible, because of its habit forming qualities. If, however, we find the true cause of headache and relieve or eliminate this, we have solved another mystery. Let us keep in mind that about 25 per cent of the patients coming into the office for examination complain of some type of headache and if we do not relieve them they will hunt another doctor in a few days. Do you blame the patient? I certainly do not.

DISCUSSION

C. K. Beck, Louisville: Headaches have given all of us doctors a good deal of trouble. We have been up a tree a good many times to find out what is the cause of headaches. Sometimes the causes are multiple. We who are doing eye, ear, nose and throat work see a great many more cases of headache than those of our brothers who are not doing that kind of work.

There are a few things that we go by to determine the cause of headache. Headache with which one arises in the morning is oftentimes due to nasal congestion or sinus trouble. (Of course these rules are not hard and fast, but they give us a lead.) Headache that comes on during the day, that grows worse as the day progresses, especially where the eyes are used for close work is oftentimes due to an error of refraction. Oftentimes the use of glasses will clear up these headaches. This is not always true, and we will sometimes be disappointed in that the rule we have set does not obtain.

One of the most distressing things that happens to one who is doing eye, ear, nose and throat work is to have referred to him these cases with a continual excruciating headache night and day, so severe that there is often-

times loss of sleep, and yet there is nothing definite that we can put our fingers on. In these cases we must think of some brain involvement. The cerebration may be all right and the reflexes may be good so far as we are able to determine, and yet here is this excruciating headache that runs the patient almost insane. These are often tumors or abscesses of the brain. It is time to call for the assistance of a neurological surgeon.

I have seen a good many of these cases and have on occasion prescribed glasses where there was an error of refraction, but without any relief of pain at all. They are the cases I think we all hate to see, except maybe the neurological surgeon.

Ernest B. Bradley, Lexington: Mr. President, of course, it is nice to be asked to say anything you want to, as you suggested, and in discussing a paper on headache there may be a good deal more to say than about other subjects. It seems to me the essayist covered the subject very well and very thoroughly handled the different causes of headache as we know them. The causes are certainly multitudinous. I feel that if we can find no focus of infection in the sinuses or teeth, and if we can exclude syphilis and hypertension and nephritis, and if headache persists we should suspect more serious causes, such as a brain tumor. I have seen patients that I know have had headache over a long period of time, the cause for which would finally turn out to be a brain tumor, while at first no such diagnosis could be made.

A cause of headache which was mentioned by the essayist is tonsillitis. If by that he means acute tonsillitis, of course, that is self-evident, but there are some headaches that are caused by chronic infections of the tonsils. These may show no more infection than what we call a two plus infection in the tonsil. Excuse the personal reference but I myself was the subject of that sort of headache. Three or four years ago, for several months every day I had headache, and this was unusual as I had never been subject to them. I had a slight hypertension and I had decided that that was what was the matter and that I had only a few more months to live anyhow. During this time I had an attack of acute tonsillitis which I never had before. A nose and throat specialist in Lexington who saw me, suggested that I have my tonsils out. I thought at the time, "well, I advise my patients to do what the doctor says, so I might as well be game and have it done, but it isn't likely to do me a bit of good."

I went into the operating room with a headache, and since that time, except on occasions when perhaps I have been entertained too lavishly, or something of that sort, I have never

had a headache, and that is three or four years ago. I feel in that case at least chronic infection of the tonsils was the cause of headache. However, in looking for that as a cause of headache I think we find it is fairly uncommon. I simply mention it as one cause because I happen to be thinking about it, having a personal interest in it. Any chronic infection, by causing toxemia, can cause headache, it doesn't make any difference whether it be chronically infected teeth or tonsils or sinuses or infection elsewhere such as prostatic infection; any chronic infection with absorption of toxins will naturally cause headache.

I hope the discussion of this paper will be continued along lines that are a little more scientific. I don't know any one symptom more common than headache, and if the patient complains of having headache he expects to be relieved within a half hour or so; he thinks you can look at him and say what is the matter and get through with him very quickly, whereas it may take months of examination and then you may not be able to find the cause.

I have enjoyed hearing the paper very much, and I think it is a very important subject.

H. G. Reynolds, Paducah: Headaches are very interesting things to talk about. Many men in general practice have the idea that a frontal headache is a symptom of frontal sinus infection. As a matter of fact, there is very little involvement of the maxillary sinus that does not produce some frontal headache, and I think that is very important to bear in mind.

I think of a patient I had several years ago who went the rounds on account of headache, I think he was my patient, at any rate I take credit for it. He went to various other doctors, and finally sometime later he told me he had been to a chiropractor and he had used colonic irrigations and the headache was relieved. Well, I can't take the blame for that, but I think that probably is an indication of the fact that we may overlook some very important things that are quite simple in the matter of headache.

The headaches due to eye conditions, various muscular anomalies and errors of refraction are familiar to all of you. I think it is important to stress at this time the necessity of consulting an eye physician, as we call ourselves now, an ophthalmologist, for this purpose because so many things may be overlooked, simple glaucoma or subacute glaucoma, as you heard in the paper this morning. You know the consequences of neglect in cases of that kind. That is one reason we feel that frequently you men in general practice don't realize the necessity of referring your patients to an eye physician instead of letting them go to an optometrist. It isn't the fact that possibly they might

fit the glass required as well as we could, but that in routine examination, we discover something, such as a simple glaucoma, that the man who is untrained in this line would overlook.

Franklin Jelsma, Louisville: The chairman asked that I discuss headaches from the neuro-surgical angle. We do see numbers of people with headaches and they always present a definite problem to us. The headaches that are due to sinuses, foci of infection, are usually found and eliminated before I see them either by x-ray or by thorough examination medically. There are headaches, though, that persist, headaches that continue, the cause for which is extremely difficult to find.

Those that are due to intracranial pressure, such as that resulting from brain tumors, abscesses, pachymeningitis, serous meningitis, that is a leptomeningitis with encysted areas over the brain, are evident after a thorough neurologic study almost always.

However, there are cases of headaches in which one cannot demonstrate a lesion, so we resort to air studies such as ventriculograms and encephalograms, whereby we can see the ventricles and the convolutions of the brain. By means of air studies we can often times find the cause of obscure headaches. For the most part, headaches that are persistent and have a rather acute nature, can be explained on some organic basis. Particularly is this so if there be evidence of increased intracranial pressure, as determined by ophthalmoscopic examination, and at times spinal fluid studies and a manometer reading. If the pressure is above normal, elevated, say above 200 millimeters spinal fluid pressure, there is pathology to which you may attribute the headache, most usually some intracranial tumor.

There are headaches for which one can find nothing, and they persist and are real and disturbing to the patient. I usually like to think of headaches in terms of the nerves over which they are distributed, if they are not due to increased intracranial pressure. If you think of the distribution of the fifth nerve, it supplies the dura and the scalp to about the mid-cranium and from the rear you have the vagus nerve or the tenth nerve that innervates the dura in the rear of the brain. Then there are the first three cervical nerves, the somatic nerves that come around from the neck to the face and scalp which are also a source of headache. The pain is distributed over the cervical nerves frequently in cases of cervical arthritis or in cases of toxic or inflammatory involvement of these nerves.

There is another group of nerves that I think should be mentioned, and that is the sympathetic nerves which innervate the blood vessels of

the dura and the blood vessels of the scalp. Such cases are illustrated by migraine and associated types of headaches. They are due to vasomotor release or vasomotor nerve seizures, just as much a seizure as you have in epilepsy when you have a convulsion, and they are problems to deal with. Sometimes we may interrupt the vasomotor system or the sympathetic system sufficiently to take care of it, and sometimes it is most impossible to do so.

This subject is too large to continue with the amount of time allotted, so since my time is up, I shall call a halt at this point.

C. F. Long, (in closing): This was a rather difficult paper to write, the subject being a symptom, but it has really done me good and I hope some of you may have gotten a good idea from it.

POSTPARTUM HEMORRHAGE*

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Louisville.

Postpartum Hemorrhage is a relatively common Obstetrical complication, and because of its frequency it is often treated casually, and not enough care is taken to prevent its occurrence or to treat the condition efficiently. This paper includes the study of postpartum hemorrhages that occurred in the Louisville City Hospital during eight years from July 1, 1929 to July 1, 1937, as well as cases that I have had in private practice. Rather than present to you a statistical analysis, I am simply going to draw conclusions as to etiology, prophylaxis, and treatment that we have been able to make from this study.

By postpartum hemorrhage is meant hemorrhage which occurs during or after the third stage of labor. Any hemorrhage of 500 cubic centimeters or more was listed as pathological and included, although we feel very definitely that the amount of bleeding in most cases should be 150-200 cubic centimeters. Four per cent or one in every twenty-five cases had hemorrhage. This is much too high, and we feel that certain steps may be taken to correct this high incidence. Only five patients in a total of thirteen thousand seven hundred twenty-two deliveries died, a .036 per cent. One of these deaths was also associated with other causes. Of course a number of hemorrhage cases dies from a later infection, so that there is a higher incidence of predisposition to infection and death following hemorrhage.

The hemorrhages were due to two main causes, lacerations and atony of the uterus.

*Read before the Jefferson County Medical Society.

There were very few serious hemorrhages due to lacerations, however, because vaginal and perineal lacerations could be controlled by pressure and repair, while cervical lacerations that caused hemorrhage were the greatest rarity that confronted us.

The predisposing causes of hemorrhage due to atony of the uterus were:

1. Overdistention as in polyhydramnios and multiple pregnancy;
2. Retention of secundines;
3. Antepartum bleeding as in placenta previa and ablatio placentae;
4. Long labor, long anesthetic, uterine inertia;
5. General debility with anemia;
6. Fibroid of the uterus, ovarion cysts and distended bladder;
7. Occasional endocrine derangement, particularly hypothyroidism;
8. Cause directly attributable to improper handling of the third stage of labor.

It should be mentioned again that besides the immediate danger of severe hemorrhage involving circulatory failure, there are also two remote dangers—1. The incidence of infection is greatly increased after hemorrhage and 2. The convalescence of the patient is prolonged.

Prophylaxis where our greatest improvement may be made is the most important consideration for us to study. As far as hemorrhage from lacerations, that may be controlled quite simply, first by pressure and then by proper suturing. The prevention of hemorrhage due to uterine atony properly begins in the prenatal period. It is important that the prenatal period be managed well with particular emphasis on the prevention or treatment of anemia. A red blood count and hemoglobin determination should be made at the first examination. Realizing there is ordinarily a hydremia and consequently an apparent anemia, it is really surprising to discover the enormous number of actual anemias that exist. It is indeed a rare occurrence to discover a patient without this condition. Iron in the form of ferric or ferrous salts should be administered throughout pregnancy or until the hemoglobin is up to 80 per cent. By keeping the blood near the normal level we keep the patient in better general condition, we make her more able to withstand blood loss, and we greatly hasten her convalescence. The calcium metabolism should be taken care of, and the amount of calcium contained in a quart of milk should be taken daily. Because of the value of Vitamin D in aiding the utilization of calcium, Cod Liver Oil should also be prescribed in an amount equivalent to two drams daily. With proper calcium metabolism the uterine musculature apparently does its work much more effi-

ciently than otherwise. By a proper, hygienic diet with avoidance of rich carbohydrates and fats, we can keep the weight within reasonable limits, and this is important when we observe the uterine inertia and long labors of so many obese patients.

In hypothyroidism, the proper administration of thyroid extract is indicated. Some men have recommended the use of small doses of Quinine during the last month of pregnancy to give better tone to the uterus. Personally I have had no experience with this practice.

Special emphasis should be placed on the first stage of labor in regard to sedation and nutrition. Keeping up the water balance and allowing the patient and the uterus to relax between contractions aid greatly in promoting the good tone of the postpartum uterus.

And finally we come to the handling of the third stage of labor. Sometimes too much bleeding occurs during this stage while at other times, trauma to the uterus because of rough handling inhibits greatly its powers of contraction.

Immediately after the delivery of the babe, pituitary extract may or may not be given; I personally prefer to give it. The uterus is about the level of the umbilicus. It should be observed and the accoucheur must wait for signs of separation of the placenta—rising of the uterus, lengthening of the cord and bleeding. When these signs occur the placenta should be expressed, being sure that the uterus is firm and in the midline. Much care must be taken not to mishandle the organ, and also when expression does take place, care should be taken to see that the membranes are expelled completely. After the expulsion of the placenta, the uterus may be massaged very gently and pituitary extract and some form of ergot may be given. Do not give pituitary extract alone because when its action has ceased after about twenty minutes, there may be a compensatory relaxation. That is why ergot must be given—to reinforce the pituitary. The uterus should be watched carefully for at least one hour in a normal case and from two to three hours if there was a placenta previa or an ablatio placenta, or a previous hemorrhage. If the placenta does not separate promptly, the best treatment is to wait, and active hemorrhage is the only indication for active interference.

The curative treatment of postpartum hemorrhage is of vast importance and much more obvious than the prophylaxis. If the hemorrhage is occurring from lacerations, it should be taken care of as has been mentioned—by pressure and then by proper suturing.

If the hemorrhage occurs from the uterus before expulsion of the placenta, every effort should be made to remove the placenta, by the administration of pituitary extract, by expression by gentle pressure of the contracted uterus, and finally in rare instances by manual removal. If it is necessary to remove the placenta manually, extreme caution should be taken in the matter of asepsis—preferably the patient should be redraped, long gloves should be used, and the patient should be under surgical anesthesia. Immediately after the removal of the placenta, pituitary extract and ergot should be given.

If the hemorrhage occurs after the expulsion of the placenta, the oxytoxics should be administered, and the uterus gently massaged. If this procedure does not cause sufficient contraction to control the bleeding, ergotrate may be given intravenously or three minims of pituitary extract may be given intravenously. In very rare instances it may be necessary to pack the uterus. I may mention here however that only once in private practice have I packed a postpartum uterus and in four years at the City Hospital, it was not necessary to insert a uterine pack.

It has been our rule and I consider it one of the few inviolable rules that we have, that if the hemorrhage is sufficient to cause general circulatory symptoms, such as fast pulse, lowered blood pressure and the accompanying subjective symptoms of thirst, sweats, and air hunger, the patient should have a blood transfusion as soon as possible. Prior to that, supportive measures are indicated, such as elevating the foot of the bed or table, giving external heat, morphine, and replacing the fluid loss with saline and glucose either subcutaneously, intravenously or both. If these measures apparently bring the patient back to her normal, it is still important to give the blood as soon as arrangements can be made, because the other fluids serve as only a temporary check and blood is absolutely imperative for permanent relief. Besides, if the bleeding is controlled, and should recur after an interval, the patient is unable to stand an additional loss of blood if the other blood hasn't been replaced to some extent.

Let me conclude by emphasizing the more important points:

1. Almost all serious postpartum hemorrhage is due to atony of the uterus which in turn due to a variety of causes.

2. Many of the cases can be prevented (a) by proper prenatal care in regard to anemia, control of weight, and proper calcium metabolism, (b) by intelligent handling of the

first stage of labor in regard to nutrition and sedation, (c) by due regard to gentleness in handling the tissues in the second and third stages of labor.

3. Proper care of the active hemorrhage means handling the tissues gently, using oxytoxics, and emptying the uterus completely.

4. For shock due to hemorrhage, in addition to ordinary supportive treatment, always give a blood transfusion, and repeat this later if the original blood loss was sufficient to warrant it.

DISCUSSION

Frieda Berresheim: There is one of the points, which I would like to emphasize. Prophylaxis. The principles of the treatment of postpartum hemorrhage are: First, prevention; second, control, and third, treatment of the physical condition following hemorrhage. Of course there are many conditions as enumerated by Dr. Starr where prophylactic measures cannot prevent a hemorrhage and only efficient treatment can reduce the hemorrhage to less dangerous proportions. To the quite imposing list of conditions predisposing to hemorrhage mentioned may I add, toxemias, abnormal shapes of the uterus, uterus bicornis, endometritis, syphilis, rupture and inversion of uterus and many more.

I would like to emphasize the fact, that the number of postpartum hemorrhages could be reduced by careful and conservative handling of all stages of labor and by avoiding unnecessary and untimely operative procedures.

For instance: deep cervical tears, that through disturbance of the continuity of the uterine muscle hinder prompt and firm contraction and result in hemorrhage. Tears that in most cases are caused by forced delivery, instrumental or otherwise through an incompletely dilated cervix.

Also rough handling of the uterus during the third stage of labor, massage, pulling on the cord, attempts to express the not yet completely detached placenta, disturb the physiological contraction of the uterus.

I believe that a great number of postpartum hemorrhages could also be prevented or intercepted by careful supervision of the patient at least several hours after delivery.

Do not worry; eat three square meals a day; say your prayers; be courteous to your creditors; keep your digestion good; steer clear of biliousness; exercise; go slow and go easy. Maybe there are other things that your special case requires to make you happy. But, my friend, these, I reckon, will give you a good lift.—Abraham Lincoln.

BOOK REVIEWS

THE INJECTION TREATMENT OF HERNIA: By Carl O. Rice, M. D., F. A. C. S., Instructor in Surgery, University of Minnesota School of Medicine; with the assistance and cooperation of Hamlin Mattson, M. D. 278 octavo pages; 83 beautiful illustrations. Cloth, \$4.50. F. A. Davis Company, Medical Publishers, Philadelphia.

Although the injection treatment of hernia has been practiced for about 100 years, it has not until quite recently been accepted by ethical physicians as a rational means of curing this common ailment.

The principles of the injection treatment of Hernia are clearly described and illustrated in this helpful and practical monograph.

The hernia clinic at the Minneapolis General Hospital has employed the injection method of treating hernia since 1932 with very satisfactory results.

The injection therapy is not offered as a panacea for the treatment of all types of hernia. It is intended as a supplement to our surgical armamentarium in certain cases in which operation is contra-indicated.

The anatomical structures involved in hernia are dealt with from the point of view of the physician who plans to inject a hernia.

The details of technique have been so well described and so clearly illustrated that it would be difficult for any physician to misinterpret their meaning.

It is important to select only the proper cases for the injection treatment, as not all patients are suitable subjects for this type of treatment. The method of selecting cases is adequately dealt with by Dr. Rice. If the physician will study these features, he will find that his incidence of success will be greatly increased.

The history of the method, the theories and principles, the solutions used and their choice, the indications and contra-indications for the injection treatment, the actual technic, everything is clearly described step by step. How to avoid complications and how to treat them if they occur, are fully explained. This is a practical, complete, up-to-date account of the modern treatment of hernia by a recognized authority. A complete bibliography concludes the book.

SYMPTOMS OF VISCERAL DISEASE, A STUDY OF THE VEGETATIVE NERVOUS SYSTEM IN ITS RELATIONSHIP TO CLINICAL MEDICINE: By Francis Marion Pottenger, A. M., M. D., LL. D., F. A. C. P., Medical Director Pottenger Sanatorium and Clinic For Diseases of the Chest, Monrovia, Professor of Clinical Medicine, University of Southern California, Author of *Clinical Tuberculosis, Tuberculin in Diagnosis and Treatment, Muscle Spasm and De-*

generation, etc. Fifth Edition, with 87 test illustrations and 10 color plates. C. V. Mosby Company, Publishers, St. Louis. Price \$5.00.

The vegetative nervous system is the correlating system upon which the body relies for quick action whenever the organism is threatened and upon which it depends for the proper distribution of those stimuli which are necessary for its normal physiologic function.

This volume has been written so that medical men may understand the every day reactions of their patients. A whole chapter is devoted to visceral pain. Additional chapters have been added to this last edition describing the vegetative centers in the brain and cord which will assist in clarifying the more complicated effect which results from a specific stimulation of some definite site in these organs.

THE PRACTICE OF UROLOGY: By Leon Herman, B. S., M. D., Professor of Urology, University of Pennsylvania, Graduate School of Medicine; Urologist to the Pennsylvania Hospital and to the Bryn Mawr Hospital; Consulting Urologist to the Methodist Episcopal and Burlington County (New Jersey) Hospitals. 923 pages with 504 illustrations. Philadelphia and London: W. B. Saunders Company, 1938. Cloth, \$10.00 net.

Special care has been taken to arrange the subject matter in a readily available form for it is intended particularly for the general practitioner and surgeon, considerable space is devoted to diagnosis, and especially to the proper order of application of available methods. The section on gonococcal infections and their sequelae and venereal ulceration are extensive.

UROLOGY: By Daniel N. Eisendrath, M. D., and Consulting Urologist to the American Hospital, Paris, Formerly Attending Urologist, Michael Reese and Cook County Hospitals, and Harry C. Rolnick, M. D., Attending Urologist, M. Reese, Mt. Sinai, Cook County Hospital, Chicago, 750 illustrations, 12 in color. Fourth edition entirely revised and reset. J. B. Lippincott Company, Publishers, Philadelphia. Price \$10.00.

The quality and popularity of this work which deals with a specialized branch of medicine and surgery is amply attested by the fact that a fourth edition has been required in 10 years. It has been completely revised and rearranged for a more forceful teaching presentation and more ready accessibility for general use not only by the specialist but the general practitioner who often is called upon to treat this type of cases who are not within reach of the specialist. Many new features have been added to each chapter.

MATERIA MEDICA, DRUG ADMINISTRATION AND PRESCRIPTION WRITING: By Oscar W. Bethea, M. D., Ph.G., Ph.M., F. C. S., F. A. C. P., Professor of Clinical Medicine, Tulane School of Medicine, Professor of Therapeutics, Tulane Graduate School of Medicine, Senior Physician, Southern Baptist Hospital, Charity Hospital of Louisiana, Member Revision Committee U. S. Pharmacopoeia. Fifth Revised Edition. F. A. Davis Company, 1914-16 Cherry St., Philadelphia. Price \$5.00.

In this day of flaunting advertisements over the radio and ubiquitous advertisements of worthless remedies, it is a consolation to have a text book on accepted remedies. This fifth edition has been made to conform to that of the U. S. Pharmacopoeia and the National Formulary. This necessitated many changes in the text relating to drugs formerly included, and has not only brought the text up to date but has greatly enlarged the reading matter.

The section on drugs has been practically rewritten.

SURGICAL CLINICS OF NORTH AMERICA: Issued serially, one number every other month. Volume 16, Number 1. (Chicago Number—February 1936. 356 pages with 78 illustrations. Per Clinic year February 1936 to December 1936. Paper \$12.00; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1936.

The Symposium in the February Number on Cancer of the Cervix, will show you how the practical phases of the subjects are presented. The purpose of these Symposia is to give the practicing surgeon the benefit of the actual clinical experience of recognized authorities in the diagnosis and detailed management of his own cases—disease as it is encountered in daily bedside practice.

NEWS ITEMS

The St. Joseph Clinical Society will hold its eighth annual spring clinic on March 28th and 29th, at the Hotel Robideaux, St. Joseph, Mo. There will be no registration fee. The purpose of the meeting is to offer a concentrated post-graduate course in recent advances in clinical medicine and surgery as interpreted by eminent clinicians who will be our guest speakers. Over 60 such guest speakers have already honored the Society in the past. This year's speakers offer an especially attractive series of clinical lectures. Aware of the ever increasing importance of more recent social trends as they affect organized medicine, they have secured Dr. Morris Fishbein who will deliver an address to which the general public will be invited. Two luncheons and banquets will be reserved for relaxation and entertainment. The St. Joseph

Clinical Society extends a cordial invitation to all members of the Kentucky Medical Association who may wish to be our guests at this clinical gathering.

Dr. Cynthia Cunningham Gounce has been appointed junior physician at the Eastern State Hospital for the Insane. The new junior physician will be in charge of the women's ward of the hospital and will succeed Dr. Louise B. Healey, who resigned in December.

Dr. Gounce is a graduate of the University of Louisville and a native of Princeton, Kentucky, and has been a psychiatrist in a private sanitarium in Memphis.

The trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, offers a prize of \$150.00 for the best original essay not exceeding 150 pages illustrative of some subject in surgical pathology or surgical practice founded upon original investigations and the candidate must be an American citizen.

The American Congress on Obstetrics and Gynecology will meet in Cleveland, September 11-15, 1939. A complete program may be obtained by writing to Fred L. Adair, General Chairman, Chicago, Illinois, 650 Ruth Street.

Dr. Irvin Abell, President of the American Medical Association, addressed the American College of Surgeons at their recent meeting in Nashville, Tenn.

Dr. John R. Heller, regional officer of the United States Public Health Service, was guest speaker at a dinner February 1st marking Louisville's observance of the Third National Social Hygiene Day. A motion picture, "Let's Open Our Eyes" was shown at 6:30 P. M. at the Kentucky Hotel.

The health committee of the Jefferson County Medical Society Tuesday suggested a five-point syphilis control program as follows:

1. Education to familiarize the public with facts.
2. Group blood-testing in factories, colleges and businesses.
3. Adequate treatment in all cases.
4. Blood tests for all expectant mothers.
5. Co-operation with the Departments of Safety and Health in stamping out prostitution.

Figures contained in reports presented at the meeting revealed only fifty-five cases of syphilis reported in 1931, as against 3,768 reported last year.

It cost \$208,430 to operate the Louisville Department of Health for the fiscal year ending August 31, according to a report issued by Dr. Gracie Roundtree. Federal and State funds totaling \$43,683; city tax funds amounting to \$134,053, and \$30,693 of milk fees were used in health work.

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EDITORIALS

BUREAU OF MEDICAL SERVICE

Last year, the Kentucky State Medical Association, acting under request from the American Medical Association, established a Committee on the Study and Provision of Medical Care. This Committee has had the active cooperation of many of our physicians, dentists, pharmacists and county officials, and has enabled us to tabulate many of the inequalities and failures of distribution of medical service in such a way as to indicate that serious planning must be undertaken to solve the problems which have arisen. In addition to plans for medical service for the indigent in the cities maintaining public hospitals, experimental plans have been inaugurated, and are now successfully operated in Fayette, Mercer, Kenton and Jefferson Counties.

The Study has made it evident that the greater part of the burden of medical care in all of our poorer counties, and in most of our other counties, has been carried, as it always has been, on the shoulders of the medical profession. It is becoming increasingly evident that this burden is becoming too great for the profession to carry alone, and that it must be shared, philanthropically, in this respect with the public. Both the American Medical Association and the Kentucky State Medical Association have approved broad plans for medical service for the indigent and the medically indigent. Realizing that whether the National Health Program is enacted into law immediately or not, something must be done about this program, Drs. Irvin Abell, Chairman of the Committee on Public Relations, A. C. McCarty, Chairman of the Committee on Medical Economics and E. L. Henderson, Chairman of the Committee on the Study and Provision of Medical Care of the Kentucky State Medical Association recommended to the Council of the Kentucky State Medical Association that it request the State Health Department to create a Bureau of Medical Service, which the Council unanimously approved, and at its meeting in Louisville on January 7, 1939, the State Board of Health unanimously requested the Governor to approve the creation of such a bureau in the following resolution:

"WHEREAS, the Council of the Kentucky State Medical Association has unanimously requested the State Department of Health to petition the Governor for his approval for the establishment of a Bureau of Medical Service in the Division of Local Health Work of the State Department of Health, and, has nominated Dr. John B. Floyd of Richmond, Kentucky, as the Director of said Bureau when created, and,

WHEREAS, under Section 2054, Subsection G, Kentucky Statutes, there is provided as follows: (copy)

"That in addition to the bureaus already established by law, the state board of health is hereby authorized to create and maintain other bureaus, and in the rules and regulations which they are now authorized by law to make and promulgate, to provide for their effective operation. The board shall have authority, with the approval of the Governor, to rearrange or discontinue any such bureaus, or to create new ones in the interest of efficiency and economy in conducting its work."

"NOW THEREFORE, BE IT RESOLVED that the State Board of Health of Kentucky hereby authorized the creation of the Bureau of Medical Service in the Division of Local Health Work of the State Department of Health whose duties shall be to assist the legally qualified and registered medical profession of Kentucky in providing complete service for the indigent and the medically indigent residents of the Commonwealth.

"The Council of the Kentucky State Medical Association shall advise and cooperate with the Board in the formulation of plans and rules and regulations for making the work of this Bureau effective for the protection of the health and lives of the residents of the State, and shall assist the registered profession in every county in the State in the formulation of plans for the purposes herein provided, provided that all plans formulated for any county shall provide for absolute freedom of choice of the legally qualified physician who shall serve them from all those qualified to practice who are willing to give service, and provided further that there shall be no restrictions on prescription or treatment, except such as are necessary for the protection of the public health, and provided further, that any expenditures made for the expansion of public health and maternal and child health services should not include the treatment of disease except so far as this cannot be successfully accomplished through the legally registered practitioner, and provided further that a person is medically indigent when he is unable, in the place in which he resides, through his own resources, to provide himself and his dependents with proper medical, dental, nursing, hospital, pharmaceutical and therapeutic appliances and care without depriving himself or his dependents of necessary food, clothing, shelter and sim-

ilar necessities of life, as determined by the local authority charged with the duty of dispensing relief for the medically indigent."

This resolution was submitted to Governor Chandler on January 7, 1939, and he gave his immediate approval.

In proposing Dr. John B. Floyd of Richmond, Kentucky, as Director of the new bureau, the Council stated as follows:

"Dr. Floyd is a cultured, splendidly qualified physician and has had a noteworthy and successful experience as Superintendent of the Waverly Hills Sanatorium and was a successful general practitioner of medicine in Richmond for a number of years, during which time, he was on the staff of the Pattie A. Clay Hospital and a member of its Board. At great personal sacrifice to himself, he went to the Legislature for two terms, where he learned methods of contact with and operation of public agencies. For the last two years, he has been Director of the Bureau of Tuberculosis of the State Department of Health, and in this capacity, has shown a fine spirit of cooperation with the physicians of the State. The independence of his course in the Legislature shows him to be politic, rather than political. We feel that Dr. Floyd has every qualification which will insure the confidence of members of the Association, and of the people of the State."

Careful reading of this action of the Council and the State Board of Health together with the proceedings of the Special Session of the House of Delegates of the American Medical Association, and of the action of our own House of Delegates as recorded in the November 1938 issue of the JOURNAL will give complete assurance to the physicians and to the people of Kentucky that there will be no socialization of medicine in this State. It is proposed to preserve the independence and integrity of the medical profession under plans which will be made operative in the several counties in the State, if and when the local profession, the county officials and the people approve such plans. Of course, this will be an evolutionary movement, and compensation for services to the indigent, and to the medically indigent will be available only when federal, state and local appropriations have been made.

In the meantime, the profession in the wealthier counties in the State will continue to experiment with plans which may be locally approved, and Dr. Floyd will be available for consultation with the profession in counties desiring to undertake such plans.

PEDIATRIC POST GRADUATE COURSE

The next course of post graduate instruction in diseases of children will be held in the Children's Free Hospital, Louisville, beginning April 26 and continuing through until the first of July.

The meetings will be held on each Wednesday from 9 A. M. until 1 P. M. The lectures will cover all of the principal diseases of children and will bring in the newer, up-to-date information on diagnosis and treatment of each disease. Especial attention will be given those trying conditions such as convulsions, colic, earache, etc. Newer methods of blood transfusion, intravenous drip, intramuscular and intraperitoneal administrations, lumbar punctures and so forth will be demonstrated at the classes.

One hour each day will be given to the presentation of interesting cases in the hospital with the X-ray and other findings and with discussion by the whole group on the diagnosis and treatment. These have proved to be among the most popular features of the course.

The fee for the course is \$5.00 and a certificate of attendance can be obtained if desired. For further information write to Doctor Philip F. Barbour, Heyburn Building, Louisville.

RADIO HEALTH PROGRAM

On March 4th, at 4:45 P. M. Central Standard Time, the State Department of Health will inaugurate a series of fifteen-minute programs to be heard each Saturday, at that hour over WHAS, the Radio Station of the Courier-Journal and the Louisville Times, Louisville. These programs will be in charge of Mrs. Viola Cawood Flowers, who has recently been added to the staff of the Bureau of Public Health Education as Supervisor of Health Education by Radio. Mrs. Flowers has had considerable experience in radio work and possesses an unusual gift for dramatization.

The first program will review the organization of the Kentucky State Medical Association in 1851 and of the State Board of Health in 1879. Subsequent broadcasts will cover the present day activities of both these organizations, and will set forth the progress now being made in major health and medical problems in the State.

COUNTY SOCIETY REPORTS

Harrison: The Harrison County Medical Society held its annual meeting and a dinner at Hotel Harrison, December 5, 1938.

Members and visitors present were: Drs. Brown and McMurtry, Falmouth, Sam Marks, John Harvey, John Scott, Offutt, Rankin, Blount and Johnson of Lexington; Blake, Orr, Fittinger, Hopkins, Rickman and Hart of Paris; Drs. Chamberlain, McIlvain, Rees, Wyles, N. W. Moore, H. C. Blount, Brumback, Moody, Swinford, Ross, Botts, Midden, W. B. Moore, McDowell, Smiser and McNeely.

The meeting was called to order by the president, K. W. Brumback. The reading of the minutes of the previous meeting was omitted and the Society proceeded to the election of officers for 1939, which resulted as follows:

President, G. H. Ross; vice-president, H. C. Blount; secretary-treasurer, W. B. Moore. Censor to 1941, M. McDowell.

K. W. Brumback reported 25 cases of food poisoning from partaking of some kind of food at a party. All of them recovered.

The address of the evening was made by President-Elect, Dr. John W. Scott, on the Future Economic Trends in the Practice of Medicine. The excellent address was much enjoyed. Meeting adjourned.

W. B. MOORE, Secretary.

Henry: At a meeting of the doctors of Henry County held on January 27 at the office of Owen Carroll in New Castle, the following physicians were present:

J. C. Hartman, F. D. Hancock, E. J. Brashear, O. P. Chapman, Maurice Bell, O. P. Goodwin, Webb Suter, W. B. Oldham, W. W. Leslie, E. E. Bickers, H. E. Troup, E. W. Wyman, Owen Carroll, also A. D. Doak of Shelbyville and A. T. McCormack, State Health Commissioner from Louisville.

The purpose of this meeting was for the reorganization of the Henry County Medical Society, which has not functioned for several years. It was the unanimous opinion of the doctors present that the Society should be reorganized, especially in view of the fact that there is so much interest being taken in proposed programs for Medical Aid.

A. T. McCormack made a highly educational talk in regard to the subject of Medical Aid and Medical Legislation, stressing the fact that the physicians should be organized in order to protect themselves and to assist in making a program that would be best suited to the doctors and the people at large. He also emphasized the fact that some plan must be taken to relieve the doctors of some of the gratuitous services they have been doing in the past. The list of medically indigent is growing so fast

that it is beyond the doctors ability to take care of these people as they have heretofore done without some remuneration. The entire body of physicians are thoroughly in accord with Dr. McCormack's suggestion and have pledged themselves to make a special effort to work in unison to promote some plan to relieve this condition.

The organization of the Society was then taken up and on motion of Owen Carroll, W. W. Leslie of New Castle, former president of the Society was elected President for the coming year; on motion of O. P. Chapman of Port Royal, Maurice Bell of Eminence was elected Vice-President; on motion of F. D. Hancock of Sulphur, Owen Carroll of New Castle, former Secretary was elected Secretary again. The President appointed E. J. Brashear, Webb Suter and F. D. Hancock as nominating committee to nominate Censors for the Society. They nominated the following physicians: Webb Suter for one year; O. P. Chapman for two years and O. P. Goodwin for three years. The nominations were seconded and the three physicians were unanimously elected. The following physicians were nominated and elected as delegates to the State Medical Society; O. P. Chapman as Delegate and Owen Carroll as Alternate. The program committee was appointed as follows: Maurice Bell, W. W. Leslie and Owen Carroll. The Society decided to hold its meetings monthly on the first Thursday night of each month at 7 P. M. beginning on the first Thursday in March at the office of the Secretary.

The meeting then adjourned to hold its first meeting as stated above.

OWEN CARROLL, Secretary.

Allen: The Allen County Medical Society met Thursday, February 16, 1939 at 3 P. M.

The following members were present: Drs. John W. Meredith, J. Y. Barbee, Lattie Graves and A. O. Miller.

It being the first meeting of the year the following officers were elected: President, Lattie Graves, Scottsville; Vice-President, A. G. Cosby, Holland; Secretary and Treasurer, A. O. Miller, Scottsville; Delegate, H. M. Meredith.

A. O. MILLER, Secretary.

Calloway: The organizing meeting of the Calloway County Medical Society met on February 9, 1939 in the directors room of the Peoples Saving Bank at the hour of two P. M. with the following member physicians present:

Rob Mason, President; Hal E. Houston, C. J. McDevitt, E. D. Fisher, C. H. Jones, J. A. Outland, Health Director; Will Mason, Ora K. Mason, E. W. Garrett, Hugh L. Houston, Secretary.

Members absent were: P. A. Hart, A. D. Butterworth, L. D. Hale, Katherine Fisher, E. D. Miller, Hazel; Dr. J. V. Starks, Kirksey.

J. B. Floyd, State Department of Health, gave a very interesting discussion of the various plans before the American Medical Association and Congress of the United States for the aid to indigent patients and the over burdened doctors and hospitals. The members of the society were pleased with his presentation and thankful for the information brought to them by a member of our State Health Department.

The members of the society agreed that hereafter we would have regular monthly meetings on the second Thursday night of each month. That these meetings would consist of a paper or case discussion by members of said society and have frequent dinners at which time guest speakers would be invited.

The program committee appointed by Dr. Rob Mason, President, is composed of C. H. Jones, chairman; E. D. Fisher and Hugh L. Houston.

The society accepted E. W. Garrett, C. J. McDevitt and Hal E. Houston as members of the society.

The secretary reported that all active physicians of Calloway County are in good standing in the society and with the state association.

HUGH L. HOUSTON, Secretary.

NEWS ITEMS

Dr. L. E. Young, Surgeon, resigned as Superintendent of the McCracken County Sanitarium and County Physician in January.

Cecil K. Drinker, M. D. Dean, Harvard School of Public Health announces that the faculty of the Harvard School of Public Health offers a short course on the Virus and Rickettsial Diseases with special emphasis on their public health significance, during the week of June 12-17. For further information write to the Secretary of the School of Public Health, No. 55 Shattuck Street, Boston, Mass.

The Fifth Annual spring meeting of the Inter-State Postgraduate Medical Association of North America will make its foreign itinerary May 17-July 11th, and many Kentucky doctors are taking this trip, which is well worth the minimum price of \$1,000.

There will also be the Inter-State tour, beginning April 14th to May 10th, including the following clinic cities: Rochester, Minnesota; Chicago, Cleveland, Boston, New Haven, New York, Philadelphia, Baltimore, and Washington, D. C. For further information regarding either of these tours write to Dr. W. B. Peck, Managing-Director, Freeport, Illinois.

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FINKELMAN, I. AND SHAPIRO, L. B.: Benedrine Sulfate and Atropine in Treatment of Chronic Encephalitis—*J. A. M. A.*, 109:344, July 31, 1937.

DAVIS, P. L. AND STEWART, W. B.: The Use of Benedrine Sulfate in Postencephalitic Parkinsonism, *J. A. M. A.*, 110:1890, June 4, 1938.

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APRIL, 1939

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- (2)c 1936. Ibid. 12, 405.
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(3) 1932. J. Pediatrics 1, 749.
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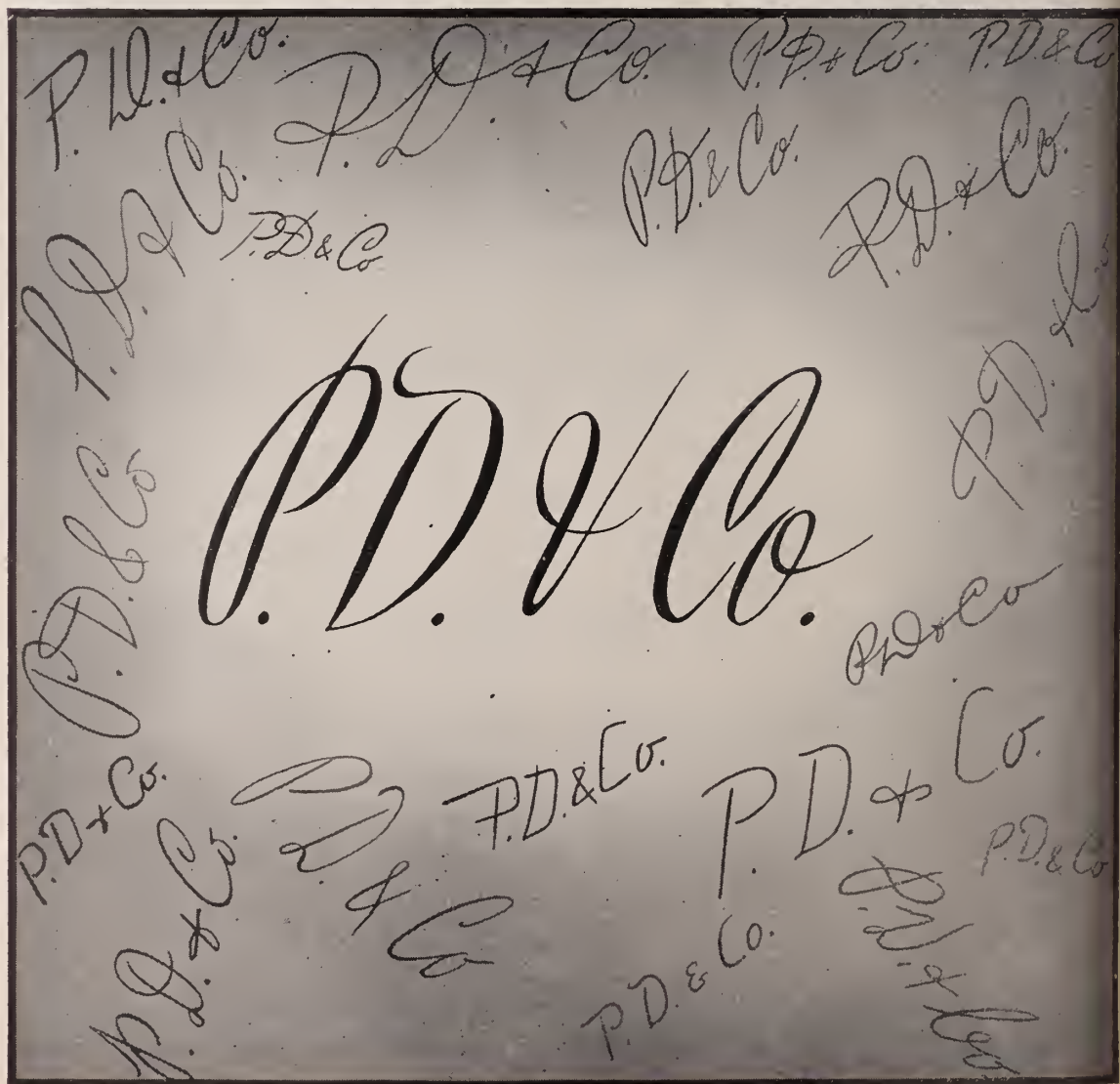
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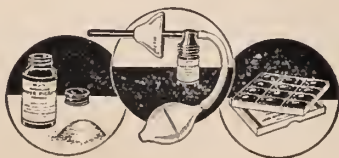
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Allen	A. O. Miller	Scottsville	April 26
Anderson	J. B. Lyen	Lawrenceburg	April 3
Ballard	F. H. Russell	Wickliffe	
Barren	Rex Hays	Glasgow	April 19
Bath	H. S. Gilmore	Owingsville	April 10
Bell	E. S. Wilson	Pineville	April 14
Boone	R. E. Ryle	Walton	April 19
Bourbon	Eugene L. D. Blake	Paris	April 20
Boyd	Hubert J. Pritchard	Catlettsburg	April 4
Boyle	P. O. Sanders	Danville	April 18
Bracken-Pendleton	W. A. McKenney	Falmouth	April 27
Breathitt	Philip Bress	Jackson	April 18
Breckenridge	J. E. Kincheloe	Hardinsburg	
Bullitt	G. F. Brockman	Shepherdsville	
Butler	G. E. Embry	Morgantown	April 5
Caldwell	W. L. Cash	Princeton	April 4
Calloway	Hugh L. Houston	Murray	April 13
Campbell-Kenton	Joseph H. Humpert	Covington	April 6 & 20
Carlisle	E. E. Smith	Bardwell	April 4
Carroll	J. M. Ryan	Carrollton	April 11
Carter	Don E. Wilder	Grayson	April 11
Casey	William J. Sweeney	Liberty	April 27
Christian	D. M. Clardy	Hopkinsville	April 18
Clark	R. E. Strobe	Winchester	April 21
Clay	J. L. Anderson	Manchester	April 11
Clinton	S. F. Stephenson	Albany	April 15
Crittenden	C. G. Moreland	Marion	April 10
Cumberland	W. F. Owsley	Burkesville	April 5
Daviess	Lee Tyler	Owensboro	April 11 & 25
Elliott			
Estill	Virginia Wallace	Irvine	April 12
Fayette	D. E. Scott	Lexington	April 11
Fleming	Roy Orsburn	Flemingsburg	April 12
Floyd	J. G. Archer	Prestonsburg	April 26
Franklin	Grace R. Snyder	Frankfort	April 6
Fulton	J. C. Morrison	Fulton	April 12
Gallatin	J. M. Stallard	Sparta	April 20
Garrard	J. E. Edwards	Lancaster	April 20
Grant	Paul E. Harper	Dry Ridge	April 19
Graves	H. H. Hunt	Mayfield	April 4
Grayson			
Green	S. J. Simmons	Greensburg	April 3
Greenup	R. L. Compton	Greenup	April 14
Hancock	F. M. Griffin	Hawesville	April 3
Hardin	D. E. McClure	Elizabethtown	April 13
Harlan	W. E. Riley	Harlan	April 15
Harrison	W. B. Moore	Cynthiana	April 3
Hart	S. F. Richardson	Munfordville	April 4
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Hickman	Layson B. Swann	Clinton	April 6
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Jackson	Thomas L. Boneta	McKee	April 1
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Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	April 11
Metcalfe	E. S. Dunham	Edmonton	
Monroe	George E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mount Sterling	April 11
Morgan	Wallace Byrd	West Liberty	
Mnhlenberg	E. L. Gates	Greenville	April 11
Nelson	R. H. Greenwell	Bardstown	
Nicholas	T. P. Scott	Carlisle	April 17
Ohio	Oscar Allen	McHenry	April 5
Oldham			April 4
Owen	K. S. McBee	Owenton	April 6
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Perry	D. D. Turner	Hazard	April 10
Pike	H. K. Bailey	Pikeville	April 17
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Scott	Carl M. Gambill	Georgetown	April 6
Shelby	A. D. Doak	Shelbyville	April 20
Simpson	N. C. Witt	Franklin	April 11
Spencer			
Taylor	M. M. Hall	Campbellsville	April 6
Todd	B. E. Boone, Jr.	Elkton	April 5
Trigg	H. L. Wallace	Cadiz	April 26
Trimble	W. O. Carson	Bowling Green	
Union	D. O. Donan	Morganfield	April 26
Warren-Edmonson	Hal Neel	Bowling Green	April 12
Washington	W. O. Carson	Bowling Green	April 19
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	April 28
Whitley	C. A. Moss	Williamsburg	
Wolfe	G. M. Center	Campton	April 8
Woodford	George H. Gregory	Versailles	April 6

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CANCER OF THE BREAST*

H. H. HAGAN, M. D.

Louisville.

The literature concerning Cancer of the Breast is too voluminous, and the extent of the subject too broad to allow a detail discussion within the scope of this paper. Therefore, we shall attempt to emphasize certain questions regarding "Early Diagnosis" and the treatment of the disease, and submit these for your discussions. If the patients heed the admonition of the medical profession and really seek early diagnosis and treatment, to what extent are we prepared to meet this responsibility? Although there has been active propaganda regarding Cancer of the Breast, it is a distressing fact that most of these cases continue to present themselves for treatment six months to three years after the discovery of the suspicious lump. However, a few do present themselves early, and we find greater difficulty in the differential diagnosis of breast tumors in this group because the lesions are so small that the usual signs of malignancy have not developed. In fact, the clinical signs upon which we usually diagnose this disease are very late signs.

Greenough defined "Early Diagnosis of Cancer of the Breast as the recognition of the disease in its early stages of development, while it is still confined to a single area, in the vicinity of its point of origin, and before it has extended either through the lymphatics, the blood vessels, or by infiltration to regions beyond the borders of the mammary gland. Since the rate of growth and the extension of cancer of the breast varies within such extraordinary wide limits, the factors of time, whether measured in weeks, months or years, is of relatively little significance in the prognosis unless considered in its relation to other conditions existing in the individual case. The significant feature in early diagnosis, therefore, is not so much the duration of the disease in point of time, as the degree of extension of the disease which has occurred during that period. Taken in this

sense, few of us will deny that early diagnosis is by far the most significant factor in the prognosis of Cancer of the Breast."

Because of our teaching and experience we visualize a typical case of cancer of the breast as one that has a solitary hard tumor, attached to the overlying skin which may have already assumed the typical "orange peel" or "pigskin" appearance. In addition there is likely to be retraction of the nipple, occasionally bloody discharge, and usually palpable hard lymph nodes near the border of the pectoralis major muscle with more or less extension toward the apex of the axilla. These clinical signs are all late evidence of the disease. Five year "cures" of not more than twenty to twenty-five per cent will be obtained in the treatment of this group of cases by any means available to the profession at the present time. Although there is not likely to be any great disagreement concerning the above statements, as we turn to consideration of the very early evidence of the disease, it is more difficult to make positive statements. The most dependable early recognizable sign is the presence of a small solitary tumor in the breast. The evidence of cancer is materially increased if there is loss of mobility of the skin over the tumor, or if there is slight deformity of the contour of the breast. It is also significant if this area of the breast has been the former site of inflammation or trauma. None of these signs are conclusive evidence of cancer. These cases must be carefully differentiated from those having the benign lesions, e. g., fibro-adenoma, simple cysts, localized mastitis and traumatic fat necrosis. Although several new methods have been suggested to aid in the differential diagnosis, one must still depend almost entirely upon inspection and palpation and his experience in interpreting the evidence obtained. And in most early cases one must resort to biopsy before a conclusive differentiation can be made. The tissue for biopsy may be obtained by aspiration, the punch-trocar method, excision of tumor or by simple amputation of the breast. The first two methods are satisfactory if positive, but not con-

*Read before the Kentucky State Medical Association, at Louisville, October 3-6, 1938.

vincing if negative. Therefore, we consider that a wide margin excision of the suspicious tumor is the safest and most dependable procedure. This will allow the most complete gross and microscopic examination of the tissue of any method except simple mastectomy, which is too radical for many early border line cases. Regardless of which method is selected, it is our firm conviction that the patient should be in a hospital when the biopsy is undertaken, and all preparation should be at hand to proceed immediately with a radical mastectomy if the lesion is found to be malignant.

The prognosis of a breast cancer is determined by the type of the tumor, the grade of malignancy and the extent of the growth.

The following tumors are encountered in the breast and certain clinical characteristics are mentioned because of their prognostic value:

The scirrhus carcinoma, or fibro-carcinoma, is an extremely hard tumor and produces early breast deformity, but is very slow to metastasize. The adenocarcinoma is likely to be a larger tumor than the scirrhus type, often dome-shape, and proceeding to ulceration, but is not inclined to rapidly extend to the axillary nodes.

The duct carcinoma may involve the entire breast and is usually more malignant than the types just mentioned.

The sweat gland carcinoma usually occurs at the periphery of the breast and is quite similar to an adenocarcinoma.

Papillary cyst-adenocarcinoma usually results from a benign papilloma of several years standing. It should be suspected in any case having a serosanguinous discharge from the nipple.

The gelatinous carcinoma is quite resistant to irradiation but is often cured by a radical mastectomy.

The anaplastic types of carcinoma are most deceptive and likely to lead us into grave errors. They are usually small and often mistaken for benign tumors. They metastasize to the bones very early, and thus emphasize the need for routine X-ray examination before operation. Although these tumors are highly malignant, they, and their metastatic areas in the bones, are extremely radio-sensitive.

In attempting to indicate the grade of malignancy of a tumor to estimate the prognosis, we may use the "Clinical Index of Malignancy" as advocated by Lee, and also the method of "Histologic Grading of the Tumors" as suggested by Broder.

The extent of the growth is the most de-

pendable prognostic evidence—for this purpose we make use of three groups:

Group I—Disease apparently confined to breast.

Group II—Disease apparently confined to breast and axillary nodes.

Group III—Disease inoperable—metastasis to supraclavicular nodes, chest or bones.

This clinical grouping is the best easily determined indicator of the prognosis, and it is also a valuable guide to the method of treatment. And in this connection I wish to emphasize one of the most important points of this discussion. If the cases in group I, in which the disease is still confined to the breast, are treated by a carefully executed radical mastectomy—including the dissection of the axilla, the removal of the pectoral muscles and a wide area of skin—we may expect 70 per cent of the patients to have a five year "cure." But only 20 per cent of five year "cures" will be obtained by the same method of treatment in group II, in which the disease has advanced beyond the breast and involved the axillary nodes. And the cases in group III having extension beyond the axilla, or metastatic lesions to the chest or bones, are beyond the curative aid of surgery. The radical operation should not be undertaken in group III cases, and any surgical operation should be considered only from a palliative standpoint.

The operative treatment of cancer of the breast dates back to the earliest days of medicine but the importance of the lymphatic involvement has not been long recognized. Lister was probably the first to perform a radical operation with block dissection of the axillary nodes. Heidenhaim, Willy Meyer and Halsted describe radical operations for the removal of the breast and axillary contents. The publication of Halsted's paper in 1894 marked the beginning of an epoch in the treatment of this disease. His method involved the removal of more tissue and a more carefully executed operation than had been previously used. In the Halsted technique it seems that the limit of operative procedures has been reached as far as the extent of the tissue removed. In fact, in recent years there has been an increased tendency towards less radical surgery. However, even those who suggest less radical procedures admit that "cure" of cancer of the breast is theoretically best served by a radical mastectomy, which involves a clean dissection of the fatty tissue and lymphatics from the axilla, and removal en masse with the pectoral muscles and breast—the skin incision extend-

ing wide of the malignant growth. Almost fifty years ago Halsted reported his group of cases treated by this method, and it is significant that there has been no group of cases reported that has offered any striking improvement in results over the series he originally reported. One of the best recent series reported is from Memorial Hospital in which radical surgery followed by post-operative irradiation produced 72 per cent five year "cures" where the breast alone was involved, 23 per cent where both breast and axilla were involved, and the two groups combined gave 40.6 per cent five year "cures." The average result reported by outstanding surgeons and clinics almost approximates the above figures.

Many interesting attempts have been made to find a modified or less radical method for the treatment of breast cancer. Grace has reported a series of 40 cases in which he used simple mastectomy and irradiation. The five year results are very similar to the results obtained by radical mastectomy in the series he uses for comparison. This is a small group of cases on which to base conclusions and there is no large series available in the literature. We feel that this procedure is definitely harmful. In many cases grossly involved axillary nodes will be left that could easily have been removed. The burden of evidence points to the fact that these axillary nodes are quite resistant to irradiation. Certainly there seems to be no good reason for leaving behind carcinomatous tissue that can be easily removed without adding materially to the surgical risk of the patient. Mr. Geoffrey Keynes never dissects out the glands of the axilla but depends entirely on interstitial radium treatment after local removal of the tumor or breast. And he writes that "It may be stated at once that close observation of the patients over many years has shown that the results on axillary nodes have been uniformly good. They have been made to disappear almost with a certainty, and they have not recurred." McKittrick employed a similar method in a group of cases and concluded that "interstitial radiation is an efficient and practical method of radiating a breast cancer," but "it can not be depended upon to protect the axilla against metastatic invasion."

The question of preoperative and post-operative irradiation presents one of the most interesting problems regarding treatment of the disease. Preoperative irradiation has not been generally used and statistics and reported experience available are too limited for definite conclusions. Adair used pre-

operative irradiation with a definite group of cases, and examined the tissue removed by radical mastectomy. It is his "impression that the five year cures will be definitely increased by the employment of preoperative irradiation; and that it should be employed in all instances of cancer of the breast complicated by pregnancy; in cases of bulky axillary disease; and in those of young women." Coutard states that "In any combination of surgery and radiation therapy, it is, in our opinion, more efficacious to precede rather than follow surgery by radiation."

Postoperative irradiation is used almost routinely in leading clinics and by a majority of surgeons. However, the increased employment of postoperative irradiation has not been followed by any striking increase in the percentage of five year "cures." The exact value of radiation can not be expressed on a percentage basis, but the wide-spread use of radiation therapy indicates that it is a valuable and desirable partner with surgery in the present day treatment of breast cancer.

Irradiation of the ovary eliminates the ovarian hormone and may be of striking benefit in cases of cancer of the breast showing metastatic disease in the bone. Definite regressive changes and striking improvement in the clinical symptoms have been observed following this type of treatment. Clinical confirmation of this observation has been experienced in our own practice and we are inclined to use a sterilizing dose of X-ray or radium in selected patients who have not reached the menopause and present themselves for treatment of cancer of the breast. These observations are most interesting and will require a larger group of cases for the treatment to become standardized. In fact, the whole relation of ovarian hormones to breast cancer opens a most interesting field for discussion and perhaps a most fertile field of investigation as to etiology, prognosis and treatment of this disease.

In summary we wish to emphasize the fact that early diagnosis, while the cancer is confined to the breast, and early treatment is the most important determining factor.

Radical mastectomy with block dissection of the axilla has produced the best results, as expressed in the percentage of five year "cures."

The influence of radiation therapy upon the survival rate has not been conclusively demonstrated. Its effect is striking in certain cases; and its routine use, in addition to

radical surgical therapy, is justifiable in an effort to improve our results.

DISCUSSION

F. W. Rankin, Lexington: Doctor Hagan has pointed out so clearly and definitely in his paper the importance of early diagnosis and the type of treatment universally utilized by surgeons, that my task as a discussant is an easy one, namely to emphasize these facts, for I am in almost complete agreement with his thesis.

A clear-cut diagnosis of an advanced cancer of the breast is a relatively simple matter. Unfortunately, when the disease has advanced to the point of fixation, nipple retraction, or bronzing, pig-skin appearance of adjacent tissues, the malignancy has progressed to the adjacent glands or intra-thoracic lymphatics and in consequence the prognosis is reduced from a favorable 70 to 72 per cent down to around 20 per cent for the whole group.

The early diagnosis of cancer of the breast is by no means always simple or easy for there are no pathognomonic signs of beginning malignancy. However, given a single, discrete, movable, solid-feeling tumor of the breast in a patient 25 years of age or older, one should presume that malignancy is present until benignancy is demonstrated. True, the vast majority of such tumors will prove to be benign (cysts, adenomas, areas of mastitis, etc.,) but the group which turns out ultimately to be cancer will be greatly advantaged by a diagnosis in this stage while the growth is local. In consequence, I have no hesitation in condemning the advice which is so frequently given to "watch a tumor", unless this period of watchfulness be limited to a few weeks at the most. If there be no change in the tumor over this short period of time, perhaps a further extension of observation may be justified, but in the average breast tumor it seems to me that a biopsy, when one cannot by clinical experience accurately, to his own conscience, make a differentiation between malignancy and benignancy, is essential. This biopsy may be accomplished in several ways but my own preference is for an excision of the tumor in a hospital under proper operating room conditions and with a pathologist immediately available for making a microscopic diagnosis. If malignancy is proved, the radical operation is immediately undertaken without loss of time.

We are all agreed that surgery, and radical surgery after the method of Halstead, who published his operation in 1894, with some modifications perhaps which appeal to us personally, is the most satisfactory treatment for cancer of the breast. The question of pre-operative radia-

tion is an unsettled one, and varying authorities, as Doctor Hagan has pointed out, disagree as to the advantages and disadvantages of its use. In my own practice I do not use pre-operative irradiation. I use it post-operatively, only in the high-grade cellular growths which usually have metastasized to the axillary glands. This middle course is prompted by the expressions of the radiologists which Doctor Hagan has given you, and of which I think Coutard's probably represents the most sensible and thoughtful opinion, viz., "inasmuch as radiation has not as yet produced the cure of an appreciable number of inoperable adenocarcinomata over a period longer than five years, those which are technically and biologically operable should by preference be operated upon, as a rule, after a moderate external irradiation."

Sterilization by irradiation has added a new element of interest in the treatment of cancer of the breast and definitely opens a field for broad investigation. The elimination of the ovarian hormone by this method many times produces definite regressive changes and improvement in clinical symptoms. The relationship of the ovarian hormone to breast cancer is not entirely clear, but this is definitely a field for research and promises to add something in prognosis. Another factor favorable to prognosis is the wide dissemination of cancer propaganda throughout the world which has borne fruit in bringing cancers of the breast at least to the physician at an earlier stage. Only recently, Adair, before the Michigan State Medical Society, presented a group of cases of cancer of the breast treated at the Memorial Hospital in New York, and found that of 750 cases treated in 1933 for cancer of the skin, breast, mouth, rectum, and uterus, 25.6 per cent were still local or had not metastasized to the glands. Four years later, 1937, in a study of 900 cases situated similarly, he found that 33.6 per cent of the group still had not extended beyond their local confines. This gain of 8 per cent in early diagnosis over a period of four years is an especially gratifying fact, for with the single exception of skin cancer, there is no site where such a percentage of cures may be expected as in cancer of the breast.

Let me again emphasize that the breast is the most favorable location for a cancer if eradication is done in a reasonable time, namely, while the growth is local. I feel, with Doctor Hagan, that the time element in diagnosing the tumor before it has spread beyond its local confines, plus the grading of the tumor by Broders' index of malignancy, are the two most important factors in prognosis, and repeat that prognosis is in direct ratio to glandular metastases, while glandular metastases are in direct ratio to the

pathological grading of the growth.

E. S. Allen, Louisville: Dr. Hagan has just given us a very interesting and instructive paper on the diagnosis and treatment of cancer of the breast.

I shall confine my remarks to paper for fear of becoming lost in this vast field about which so little is known as to its cause, and discouraging results as to its cure.

The essayist's opening paragraph "The diagnosis of cancer of the breast" is the crux to the entire problem. The only certain cure is to recognize it while a local condition, as an encapsulated circumscribed nodule that has not broken through its primary retaining cell wall.

Propaganda is no doubt bringing a great many women to their physician or to clinics for examination and many early tumors are detected, when radical excision can save them a cancer death. When cancer is no longer a local affair, the hope for cure from radical surgery and radiation is very discouraging. Educate the public to submit to a thorough examination at least once a year and to consult a physician at once if a nodule or mass is discovered in the breast, or if any condition attracts their attention to the breast it should be investigated. Too often all of us have seen inoperable tumors of the breast and the reason given is that it never gave pain, which we know is rather characteristic of a malignant growth, that it does not give pain in its early stages. Doctors sometimes are responsible for delay. All of us have had women to state that Doctor so and so examined me a year ago and said that it did not amount to much, to forget it and come back in six months or a year. I am glad to state that since we have become more cancer conscious, such advice is rarely if ever given.

What is to be done about it, when a tumor or nodule is discovered in the breasts? Shall we try to make a differential diagnosis as to whether it is malignant or benign? My opinion is emphatically NO. The microscope should determine that. I do not think it very difficult to differentiate between a chronic mastitis and cancer. In mastitis the patient always complains of pain or tenderness, accentuated at or just before the menstrual period, and the nodules are multiple or involve practically all of the breast area. Some authorities state that cancer develops in about 15 to 20 per cent of mastitis cases. But a concrete, single nodule in the breast should be removed for microscopical examination with preparation for radical surgery, as was brought out by the essayist. When the diagnostic signs of course are in evidence, most likely the growth is no longer confined to its point of origin, but has broken through

the protecting wall and through lymphatic channels has invaded the axilla and probably beyond. Some one has said, Teach all girls of 20 to feel the breast tissue at intervals for a lump, and the appalling mortality of cancer of the breast can be made to drop at once. No one can be sure a nodule is benign. At the Mayo Clinic in a series of 100 cases, a clinical diagnosis of malignancy was made in 84 per cent and microscopically 94 per cent were malignant and 6 per cent benign. And in 100 cases in which 72 per cent were diagnosed clinically as benign 86 per cent were benign and 14 per cent malignant. In this series 15 per cent were thought doubtful, and 58% proved to be malignant. Judging from this study one can easily draw the conclusion that clinically men with much clinical experience cannot with accuracy, say which tumor is malignant and which benign. A word as to treatment.

I am sure some will take issue with me here. It has been my custom to thoroughly radiate my breast cases anteriorly and posteriorly before operation, unless I am as certain as one can be that there is no axillary involvement, and at the expiration of two or three weeks remove the breast, thoroughly stripping Hidin-hine fascia from the pectoral muscle, and if there is extensive axillary involvement not to molest the lymphatic chain but to introduce radium well up in the axilla and under the clavicle and follow this with post operative X-ray. I believe with massive lymphatic involvement, to tear the lymphatic chains and spill millions of cancer cells into a perfect pabulum of traumatized unprotected cells, encourages metastasis and massive transplants. If a cancer cell was the size of a grain of wheat, I am sure we would observe a well planted field in a rich soil.

If radium and X-ray are of any benefit it seems to me that with radium under the skin and X-ray on the outside that a young cancer cell would have small chance to survive. I am of the opinion that radium in the axilla and massive X-ray on the outside is preferable to a wide skin excision and radical excavation of the axilla.

Cancer of the breast is a most discouraging problem.

I have seen a recurrence in the hip after ten years of symptom free and a recurrence in the lung after 14 years.

Sterilization of the younger subjects probably has a deterring influence on the growth of cancer of the breast. I have used it in several cases this year, but time sufficient has not elapsed to report on it.

Examine every woman's breast who consults you for other conditions.

Malcom D. Thompson, Louisville: I quite agree with the gentlemen who preceded Dr. Hagan this morning that the subject of the control of syphilis is most important from a public health point of view, but I also feel that the control of cancer, and particularly cancer of the breast, is most important from a public health point of view. When one considers that cancer is the second most frequent cause of death in the United States and when one considers that the breast is one of the few locations in which an easy positive diagnosis is possible, then the importance of what Dr. Hagan has told us this morning is most evident.

The most essential part of Dr. Hagan's paper was included in one sentence, namely, that the usual early manifestation of cancer of the breast is a small single lump in the breast. Please note that he used no qualifying adjective other than "single" and "small." We know that more than 50 per cent of the mammary lumps which anxious people carry into the doctor's office are cancer, and we know that they are cancer irrespective of their size, shape, duration, or age of the patient. Consequently all mammary lumps should be suspected of malignancy until proven otherwise.

In associating with medical students and with physicians in a diagnostic cancer clinic, one is constantly impressed by the reluctance of both students and physicians even to consider cancer as a possible diagnosis unless the advanced signs of cancer are present. It is for meeting such as this and for papers such as this to counteract this faulty attitude and this incorrect approach toward the diagnosis of cancer. I think Dr. Hagan's paper has done that one thing, and I think the gentlemen who, have discussed it have also helped him in doing it.

Misch Casper, Louisville: Although Dr. Hagan's paper has been thoroughly discussed, I should like to add a few thoughts on the question of early diagnosis, which is, after all, a vital point in handling cancer cases. The chief early symptom that brings a patient to us is a lump in the breast, discovered by the patient herself. How are we going to increase the number of patients who thus come early? We can do no better than to follow the recommendation made by the Cancer Commission back in 1904: use propaganda and get the message to the laity. Years ago, Dr. J. N. McCormack fostered that movement in this State by sending out young surgeons to various county seats to indoctrinate the laity.

It is encouraging to know that each county is represented here. May I urge each member to carry our message back to your own county society and see that it reaches the people themselves; go out and discuss it with them in lectures to the women's societies. I sometimes

think it may be well also to contact the men's clubs and get husbands interested. Instruct mothers, when teaching their young girls how to care for their bodies, to have them notice their breasts.

The breasts, as far as the patient is concerned, are both the same, though of course we know histologically they are not. In cancer cases the trouble is always unilateral; so when the patient finds that one breast differs from the other, she should go to her doctor and have an examination made.

Let us not be derelict in examining these cases thoroughly. The disease can usually be discovered by transillumination, which can be made in the office very easily and at no great expense. A good strong flashlight is of assistance, there being a pocket size now that is suitable. The patient should be examined both in a sitting and a reclining position, for if various positions are used, cancer is more readily detected.

We cannot do any more in surgery than we have been doing over the years except to get the patient early. This is one point that all who have preceded me have emphasized, and that I wish to re-emphasize. Let us get it early, and we will eradicate cancer of the breast.

Toxemia of Pregnancy and the Placenta.—According to Bartholomew and Colvin, placental infarcts of the more acute types are definitely associated with toxemia of pregnancy. The hypercholesteremia of pregnancy is the basis for vascular changes in the placental arteries which predispose to infarction. Hypothyroidism and a diet rich in cholesterol-containing foods are important factors in excessive hypercholesteremia. The trauma of fetal movements on the placental arteries in the latter part of pregnancy is not only a predisposing cause of localized cholesterol change in the vessels but also an exciting cause of thrombosis or rupture at the site of such change, with resulting infarction. The high content of arginine in placental tissue is the probable explanation of the specific eclamptogenic character of placental autolysate through the formation of guanidine. The known pathologic effects of guanidine, peptone and histamine apparently explain the clinical and pathologic manifestations of toxemia of pregnancy. The results of a gross examination of 100 placentas from both toxic and normal cases, without knowledge of the clinical history, shows that it is possible to diagnose the occurrence of severe toxemia in 90 per cent of the cases. Conversely, it is possible to predict the type of infarcts that will be found in the placenta from a knowledge of the clinical history of the pregnancy as to toxemia. With the experience of examining placentas as "unknowns," it has been found possible to establish criteria for an exact classification of placental infarcts and their relation to toxemia.

AN ANALYSIS OF 6872 ADMISSIONS TO THE LOUISVILLE CITY HOSPITAL HAVING POSITIVE SYPHILIS SEROLOGICAL REPORTS—1928-1937,

INCLUSIVE

EDWARD C. HUMPHREY, M. D., Louisville
JAMES ROBERT HENDON, M. D., Louisville
FRANK M. MELTON, B. A., Louisville

In May 1938, the State health authorities of Kentucky, in cooperation with the Works Progress Administration and the officials of the Louisville City Hospital, began an analysis of those admissions to the wards of the hospital having positive syphilis serological reports in the period from 1928 to 1937, inclusive. The survey had the following objectives:

- 1. To determine the incidence of syphilis in all admissions to the wards of the hospital, regardless of the admission diagnoses.
- 2. To ascertain the racial, sex and age distributions in the syphilitic group.
- 3. To study the relative frequency of the various stages and manifestations of syphilis in a given group.
- 4. To determine the extent of treatment of this group by the hospital clinic.

The group of admissions studied in this survey was taken from a special file maintained by the record department of the Louisville City Hospital, in which are listed all admissions having positive Wasserman or Kahn reports. This consisted of approximately 7500 admissions, of which only 6872 were used; the remainder were excluded because the Wasserman reports showed only one or two plus without clinical evidence or history of syphilis. This group of 6872 admissions to the hospital represented 4517 patients having 6881 different syphilitic diagnoses and 6962 admissions to various wards in the hospital. It is to be emphasized that this is not at all a study of a syphilis clinic or dispensary, but of persons admitted to a general hospital. In the great majority, syphilis was an incidental finding, and had nothing to do with admission to the hospital.

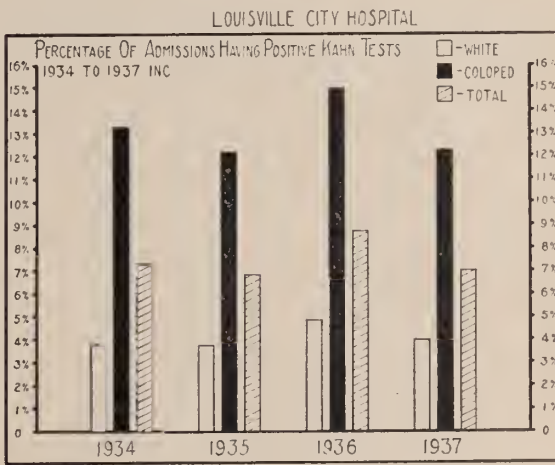
In Chart 1, Graphs 1A and 1B, only the period of 1934 to 1937, inclusive, was included for several reasons. First, in preceding years, the serological routine reports were not felt to be sufficiently complete for a

study of this nature. Second, a small group of cases in the period 1931 to 1933 was, unfortunately, overlooked because of changes in the filing system. In passing, it should be

SEX AND COLOR	1934			1935			1936			1937		
	ADMISSIONS	TOTAL SYPHILITIC ADMISSIONS	%	ADMISSIONS	TOTAL SYPHILITIC ADMISSIONS	%	ADMISSIONS	TOTAL SYPHILITIC ADMISSIONS	%	ADMISSIONS	TOTAL SYPHILITIC ADMISSIONS	%
MALE WHITE	3565	135	3.73	3490	127	3.64	3262	183	5.61	3759	160	4.26
MALE COLORED	1934	269	13.91	1923	263	13.68	1984	293	14.77	2030	227	11.18
FEMALE WHITE	3707	144	3.88	3561	139	3.90	3252	131	4.03	3606	135	3.74
FEMALE COLORED	2293	291	12.69	2176	236	10.85	2097	317	15.12	2233	294	13.17
TOTAL MALE	5499	402	7.31	5413	390	7.20	5246	476	9.07	5789	387	6.69
TOTAL FEMALE	6000	435	7.25	5737	375	6.54	5349	448	8.38	5839	429	7.35
TOTAL WHITE	7272	277	3.81	7051	266	3.77	6514	314	4.82	7365	295	4.01
TOTAL COLORED	4227	560	13.25	4099	499	12.17	4081	610	14.95	4263	521	12.22
TOTAL	11499	837	7.28	11150	765	6.86	10595	924	8.72	11628	816	7.02

CHART NO. 1

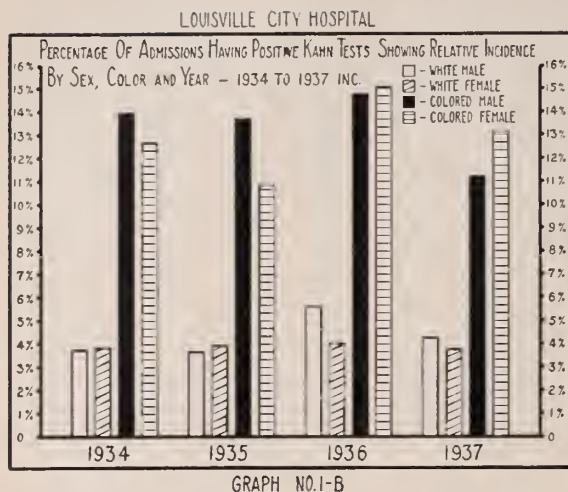
noted, however, that, in studying the admissions in the period of 1928 to 1937, inclusive, a definite trend was found toward better venereal histories, physical examinations and serological studies in the routine examination of all patients. The classification into the different types of syphilis in the cases studied was based on the routine examination of the patients in the wards, without special emphasis on their syphilitic status. Spinal fluid tests, fluoroscopies, X-rays and other special studies were done only in those cases in which the clinical manifestations and histories warranted them.



GRAPH NO. 1A

SEX AND RACE DISTRIBUTION OF SYPHILIS

Chart 1 and Graph 1A show that the incidence of positive Kahn tests for all admissions was relatively constant, averaging 7.5 per cent. The incidence of positive tests in the colored patients averaged 13.1 per cent, whereas in the white patients it averaged 4.1 per cent.



Graph 1B shows that sex plays no controlling part in prevalence of syphilis, either in white or colored race. The exact figures are: white men, 4.3 per cent; white women, 4.0 per cent; colored men, 13.4 per cent; colored women, 13.07 per cent.

AGE DISTRIBUTION OF SYPHILIS

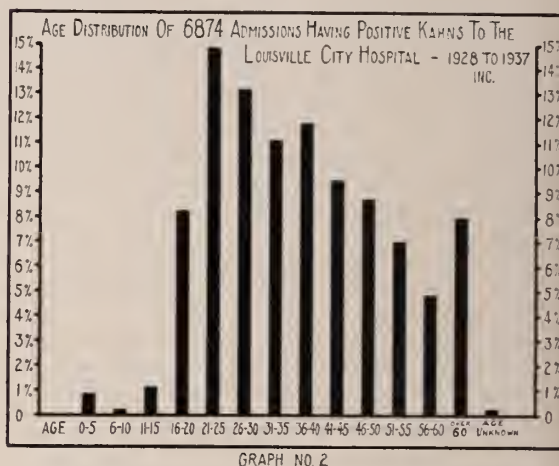
The incidence of syphilis before the age of 15 is not significant. A sharp increase in incidence occurs in the age group of 16 to

LOUISVILLE CITY HOSPITAL - 1928 TO 1937-INC
AGE DISTRIBUTION OF 6874 ADMISSIONS HAVING POSITIVE KAHN TESTS.

0 - 5 YRS.	58	0.84%
6 - 10 YRS.	12	0.17%
11 - 15 YRS.	78	1.13%
16 - 20 YRS.	568	8.26%
21 - 25 YRS.	1021	14.85%
26 - 30 YRS.	907	13.19%
31 - 35 YRS.	768	11.17%
36 - 40 YRS.	808	11.75%
41 - 45 YRS.	653	9.50%
46 - 50 YRS.	603	8.77%
51 - 55 YRS.	487	7.08%
56 - 60 YRS.	335	4.87%
OVER 60 YRS.	550	8.00%
AGE UNKNOWN	26	0.38%
TOTAL	6874	99.96%

CHART NO. 2

20 years, amounting to 8.3 per cent of the total syphilitic group. The greatest incidence occurs in the age group of 21 to 25 years, which represents 14.9 per cent of the total. 59.2 per cent of the total syphilitic admissions were between the ages of 16 and 40 years.

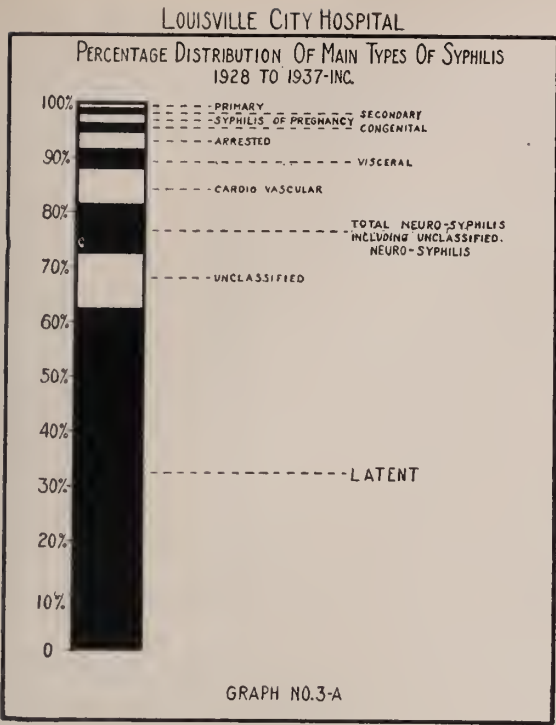


RELATIVE FREQUENCY OF THE VARIOUS MANIFESTATIONS OF SYPHILIS

The 6872 admissions represented 6881 different diagnoses of the various manifestations of syphilis, which are given their appropriate percentages in Chart 3. The classification used in this study was based on that

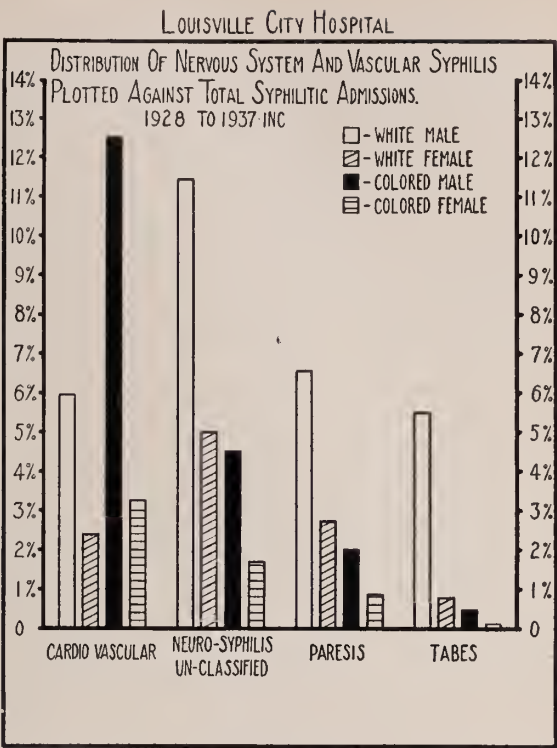
CHART NO. 3	TYPE		TOTAL WHITE ADMISSIONS		TOTAL COLORED ADMISSIONS		TOTAL ADMISSIONS		PERCENTAGE	
	WHITE	COLORED	WHITE	COLORED	WHITE	COLORED	WHITE	COLORED	WHITE	COLORED
ARRESTED	104	426	54	409	50	446	135	353	29	224
BONE	25	102	10	97	15	133	27	60	12	55
CARDIO-VASCULAR	106	434	79	358	27	241	347	781	273	1252
CARTILAGE	14	57	5	37	9	85	14	51	11	55
CNS-ENCEPHALITIS	207	848	151	1145	56	500	138	310	99	454
CONGENITAL	23	135	14	106	19	169	81	182	28	128
ESOPHAGUS	0	0	0	0	0	0	1	0	1	0
EYE	7	28	6	048	1	008	17	038	8	036
GUMMA	1	004	1	007	0	0	4	009	3	013
LARYNX	5	020	0	0	5	044	1	000	1	004
LATENT	1310	537	640	4852	670	5892	2999	6751	1589	6400
LIVER	15	061	8	060	7	062	16	056	2	009
NOSE	0	0	0	0	0	0	1	002	0	0
PARASIS	118	483	87	653	31	276	63	141	44	201
PRE-NATAL	27	110	0	0	27	241	58	130	0	58
PRIMARY	37	151	27	204	10	069	25	056	20	091
RECTUM	1	004	1	007	0	0	6	013	0	0
SECONDARY	37	151	19	144	18	160	29	065	17	078
SKIN	48	195	21	159	27	241	49	110	21	096
STOMACH	1	004	0	0	1	008	1	002	1	004
TABES	82	336	73	553	9	080	12	027	11	050
TONGUE	1	004	1	007	0	0	0	0	0	0
UN-CLASSIFIED	260	1066	123	324	138	1232	418	347	180	826
TOTAL	2439	9991	1319	9291	1120	9992	2442	9892	2179	9991

presented by Moore in his book, "The Modern Treatment of Syphilis," with such modifications as were necessary for simplification of tabulations and to conform with the diagnoses stated on the patients' charts.



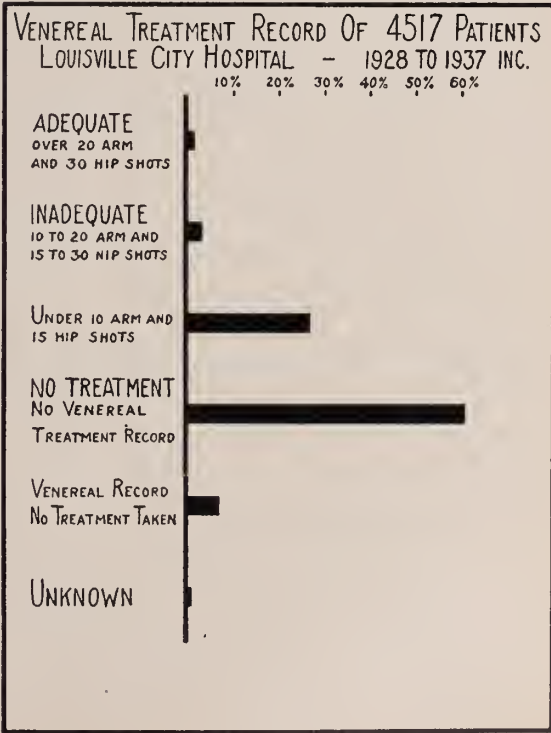
Graph 3A shows a breakdown of the syphilitic patients into the different types of syphilis. It can be seen that by far the largest percentage consists of the latent type. This group comprises 62.6 per cent of the total syphilitic diagnoses. Of course, as is well known, the more searching the examination, the fewer cases remain in the "latent" group. Strictly speaking, a case should not be placed in the latent classification until neuro-syphilis is excluded by a spinal fluid examination, and aortic disease is excluded by history, examination and fluoroscopic observation of the aorta. As mentioned previously, these special tests were not made routinely on the cases in this study. The low incidence of primary and secondary lesions may be attributed to the fact that the majority of patients with these lesions are examined and diagnosed in the syphilis clinics of the hospital, and usually are not sent to the wards of the hospital for this diagnosis alone. The two other most important are the cardio-vascular and the neuro-syphilis groups, forming 6.5 per cent and 9.0 per cent, respectively, of the total syphilis.

Graph 3B shows how these important types were distributed by sex and color, and illustrates beautifully how all of these malignant types of syphilis show a much higher incidence in men than in women for both colors. This graph also shows the very high relative incidence of cardio-vascular syphilis in colored men and of neuro-syphilis in white men.



TREATMENT DATA

Chart 4 and Graph 4 show the extent of treatment of these cases in the syphilis clinics of the Louisville City Hospital. They do



not take into account any treatment received elsewhere, i. e., outside of the hospital. Also they represent merely the treatment up to date. Many of the cases are still under treatment. Lastly, the classification into a certain number of arsenic and a certain number of heavy metal injections is an arbitrary one. For example, there were many cases which had, for various reasons, been treated with heavy metal alone. Under our classification, these would show as "inadequate," when actually heavy metal alone was the proper treatment.

LOUISVILLE CITY HOSPITAL
VENEREAL TREATMENT RECORD OF 4517 SYPHILITIC PATIENTS
1928 TO 1937, INC.

TOTAL SYPHILITIC CASES 4517	ADEQUATE	INADEQUATE	NO TREATMENT		UNKNOWN	
	OVER 20 ARM AND 30 HIP SHOTS	10 TO 20 ARM AND 15 TO 30 HIP SHOTS	UNDER 10 ARM AND 15 HIP SHOTS	NO VENEREAL TREATMENT RECEIVED	VENEREAL RECORD - NO TREATMENT	UNKNOWN
	51	136	1183	2790	311	46
	1.13%	3.01%	26.19%	61.77%	6.89%	1.02%

CHART NO. 4

In spite of these points, it is discouraging to note the inadequacy of the therapy. The chief factor here is simply the inadequate facilities for following up delinquent patients. It is our impression that much more effective follow-up work is being done now, although there is no question that further improvement could be made if more funds were available.

SUMMARY AND CONCLUSIONS

1. The incidence of syphilis among the general admissions to the Louisville City Hospital over the period studied was 13.1 per cent in the colored patients and 4.1 per cent in the white patients.

2. When we consider either color, the proportion of men who have positive Kahn's is about the same as that of women.

3. The greatest incidence of syphilis occurs in early adult life.

4. When we consider the two great malignant types of syphilis, neuro-syphilis and cardio-vascular syphilis, we find that:

- There is a much higher incidence in men than in women for both colors.
- There is a very high relative incidence of cardio-vascular syphilis in colored men and of neuro-syphilis in white men.

5. Analysis of the treatment data shows that:

- A very large percentage (over 60 per cent) of the cases have no venereal treatment record at all.
- A very small percentage of those treated have had adequate treatment.

There is no question that a far better showing in this regard is now being made at the Louisville City Hospital. For example, a system has now been instituted which provides for persons on whom a positive Kahn is discovered as an incidental finding. These people are incorporated into the regular venereal clinic load, and followed just as though they had come in because of their syphilis.

SYPHILIS CONTROL, THE MEDICAL PROBLEM*

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Louisville.

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It is conservatively estimated that in Kentucky today are 132,000 persons who now have, have had, or will have at some time in their lives, syphilis. Eleven thousand new cases of the disease in the State are being recognized annually. Most of the new cases are contracted between 20 and 30 years of age—that is, in the most active period of life. The life of each of these infected persons is shortened an average of 5 years.

Twenty thousand potential mothers in Kentucky now have, or have had, syphilis. Of these potential mothers, those who go untreated will give birth to dead or diseased babies five times out of six; on the other hand, if they are discovered early and adequately treated, they will give birth to healthy babies ten times out of eleven. One-third of the babies born alive with congenital syphilis each year will develop partial or complete blindness, if allowed to go untreated, while many others will lose their lives early in infancy or become permanent medical cripples.

Approximately 10 per cent of the inmates of insane asylums are there as a direct result of a single complication of syphilis—general paresis. It is estimated that 2700 of the 30,032 deaths in Kentucky in 1937 were due, directly or indirectly, to this disease. Any disease which causes such human waste

*Read before the Kentucky State Medical Association, at Louisville, October 3-6, 1938.

is a socio-economic problem of the first order. Syphilis affects the health and wellbeing of more citizens in Kentucky than any other single communicable disease. Its conquest will require the united efforts of all the various elements of the population which can, in any way, or to any degree, aid in combatting it.

The force which can contribute most to solution of this outstanding public health problem is, of course, the medical profession. The physicians of the State are responsible, both legally and morally, for control of the disease, and it should be said to their credit that they are more and more recognizing and assuming this responsibility. They are legally responsible because the people of the State have, by legislative enactment, charged them with responsibility for public health and medical service. They are morally responsible because they alone have the scientific knowledge requisite for adequate performance of the job. They know the biology of the spirochete which has made it vulnerable to attack: they know how it travels from person to person; they know how it enters the body of the well person and they know the physical manifestations which it produces once it has gained entrance; they have at hand a specific agent with which to treat effectively affected persons and they have the technical skill to administer this agent; they also know that an infectious case can be rendered noninfectious by the administration of from four to eight doses of this specific agent and that, when appropriate treatment is continued from fifty to eighty weeks, the case is not only prevented from lapsing into an infectious state, but the chances are excellent that the disease has been permanently arrested.

From 60 to 65 per cent of currently treated cases of syphilis are in the care of the private medical practitioners of the State, and a large portion of the remaining cases are being treated in clinics in charge of physicians who either volunteer their services or occupy official public health positions. The profession, therefore, can, by diligence in reporting these cases, reveal the actual annual attack rate of this disease. Thus, and thus alone, will we be able to know its true prevalence and measure progress in its control. While this reporting is a legal responsibility, the moral obligation should be even more compelling.

But the prompt and universal reporting of cases is only the first of many ways in which the medical profession can and should assist in conquering the disease. Broadly speaking, the control of syphilis depends on

the ability of the physicians to (1) find the cases, (2) treat the cases and (3) teach both patients and the masses the nature of this disease, to the end that both the infected and noninfected may know the essential truths concerning its control.

In the matter of case finding, the private practitioner occupies the key position. It is to the private practitioner that our people go in time of physical or mental distress. It is he who first sees the painless, indurated sore, which has been present too long on the genitalia or elsewhere. It is he who first sees the rash that can not be easily accounted for by the history of the case or other physical findings. It is he who first sees the persistent sore throat, the falling hair, the painless ulcerations of the skin, the failing vision, or the staggering gait. His index of suspicion should be raised sufficiently high to suspect syphilis when he encounters these, or any of the other numerous manifestations of the "Great Imitator." More than that, he should regard every patient as a potential syphilitic and make it his routine practice to apply the procedures necessary to rule out such a possibility. Clinical history, plus physical findings, darkfield examination of serum from lesions or serological examination of the blood, will assist him in confirming or disproving his suspicion. Pregnancy should, of and in itself, be an indication for a blood test. Routine blood testing of all pregnant women will uncover many hitherto unrecognized cases of syphilis and, by bringing them under treatment, prevent many additional cases. A pregnant woman who has ever had syphilis should receive treatment through each succeeding pregnancy, regardless of the amount she has had before.

Of the 56,000 births in the State in 1936, 2,000 were stillbirths. Of these stillbirths, about 25 per cent, or 500, were due to syphilis. If the presence of syphilis in the mothers who gave birth to these 500 dead babies had been detected before the fifth month of pregnancy and the mothers had been given adequate treatment from time of detection to delivery, 10 out of each 11, or 450, of these babies would have been saved. This does not take into consideration the babies born alive with congenital syphilis, many of whom will die, become blind, demented, or hopelessly crippled. This useless loss of human life, the toll of a preventable disease which the medical profession alone has the knowledge and skill to prevent, makes more manifest the need for concerted action by the profession.

Nor does the physician's obligation end when he has diagnosed and brought the case under treatment. He still owes an obligation

to society—that of finding, or assisting in finding, the source of the patient's infection, in order that this source may be brought under treatment and the infection of others thus prevented. The private practitioner's cooperation in this phase of syphilis control is absolutely essential, for he is the one in whom the patient has confidence and to whom the patient will most readily give information concerning the social and public health aspects of his infection. The physician owes it to society, as well as to himself, to locate both the source of the patient's infection and the contacts to whom the infection might have been transmitted. This is a phase of the case which he can not afford to neglect or ignore. If and when he hasn't the time to follow up all contacts, he should enlist the aid of the local health officer, who will be able to apprehend the contacts and turn them over to him for investigation and care. The private practitioner has the opportunity, the ability, and the responsibility to do this; indeed, the case of syphilis is not completely cared for until it has been done.

When the diagnosis of a case of syphilis is established by a physician, the physician assumes the obligation to his patient of either adequately treating him, or seeing to it that he obtains such treatment elsewhere. The treatment of syphilis is now standardized to a point where determination of what constitutes adequacy is easily determined. This standardization of treatment has been worked out by a group of competent syphilologists in this country, who pooled their resources in order to arrive at an intelligent treatment regime.

It is admitted that each case of syphilis, like each case of varicose ulcer or appendicitis, is an individual medical problem. However, it has been repeatedly demonstrated in clinics, large and small, throughout the country that this standardized regime can, with slight modification, be given to the vast majority of cases of syphilis, early and latent. There is an absolute minimum of treatment which an early case of syphilis must have, if we are to do our job properly. Twenty arsenicals and 20 heavy metals are the least that can be safely counted on to prevent infectious relapse. To effect a complete arrest, from 50 to 80 continuous treatments, consisting of appropriately alternating courses of arsenicals and heavy metals, are required. In pregnancy, the patient should receive, if at all possible, 10 arsenicals and 10 heavy metals, started before the fifth month of gestation. When the diagnosis of syphilis in pregnancy is made later than the fifth month, all the treatment possible should be gotten in before

delivery, because some treatment is better than no treatment at all.

The physician who gives only a few, though, perhaps highly priced injections, may actually be doing his patient harm, in that he has not cured the disease, but may have destroyed, in some degree, the patient's inherent ability to overcome the infection. Further, if, in his anxiety to start early, the physician begins treatment before a diagnosis of syphilis has been definitely established, then stops treatment, because of doubt in his own mind, before all the spirochetes are killed, he has probably done the patient more harm than if he had waited for a definite diagnosis to be established and carried treatment to adequacy. The administration of mercury alone, by any route, is not to be considered as good treatment for syphilis. In fact, mercury alone will not stop the progress of new cases of the disease. On the other hand, reactors to arsenicals may be adequately treated with bismuth alone, provided it is intelligently and intensively employed over a long period of time.

Cost is today one of the greatest deterrents to the adequate treatment of syphilis. At current prices, it is estimated that the cost of treating properly an early case of syphilis would be between \$250.00 and \$300.00. As most cases of syphilis are contracted in the early, active years of life, when most young people are just getting started in their careers, it is easy to realize that few can afford to pay for adequate treatment. This means that treatment is started, continued until lesions heal and payment becomes difficult and then stopped. The average practitioner, of course, can not afford to pay for drugs, equipment, and office overhead and then treat cases of syphilis for nothing. Moreover, the physician who treats syphilis is taking an appreciable risk, as a few patients will unquestionably suffer severe complications from treatment. At the same time, however, many physicians feel, with good reason, that a case of syphilis can be treated at a moderate price, to the advantage of both the physician and the patient. More patients can afford the lower cost and the patient treated at a price he can afford to pay is held longer. This being so, it is reasonable to assume that a moderate price for treatment will actually work financial gain to the physician.

No group is better qualified or has a greater opportunity to educate the people as to the nature and danger of syphilitic infections than the practitioners of medicine. However, more is involved in the control of syphilis than knowing the nature and danger of the disease. Concerned in the propagation

of this disease is one of the primal instincts of man, that of the sex urge. In the control of this disease, "decided benefit is to be hoped for only where increase of knowledge is accompanied by self control—by loyalty, conscious and unconscious, to higher ideals of personal behavior." While the medical profession is profoundly interested in this phase of the job, general education on the subject had best be left to parents, teachers and the church. The task, however, of teaching people, both individually and en masse, the scientific truths that should be known about syphilis, thus stripping it of its cloak of silence and bringing it out into the open where it can be more easily attacked, is definitely one for the physician, be he in the private practice of medicine or in public health work. Indeed, the private practitioner and the public health physician must work together, if ultimate success is to be attained in the control of this disease. If the health officer teaches that it takes from 50 to 80 weeks properly to treat a case of syphilis and the private practitioner says he can cure a case in 8 to 10 weeks, the result can only be to break down confidence in the whole profession. The health officer may point out that, in this country, 72 out of every 73 cases of syphilis in pregnancy are overlooked or missed, but only the private practitioners, who are caring for these mothers, can correct this situation. Health officers may teach that untreated syphilitic mothers will give birth to dead or diseased babies five times out of six, whereas proper treatment, started early, will insure healthy babies ten times out of eleven. The private practitioners, however, who are caring for these mothers, can alone improve this condition by routinely testing their patients to find such cases.

The health officer may teach that only 1 in 9 syphilitic pregnant women, who start treatment, take enough to protect the infant. The private practitioner is in best position to impress upon his patient the importance of continued treatment. The private practitioner can also best point out to his patient that, unless proper treatment is taken, cardiovascular disease is likely to develop, and that once this has occurred, the chances are that the patient's life will be shortened from 19 to 23 years. In fact, the physician who treats a case of syphilis should keep up a constant educational campaign, in order to keep his patient coming until properly treated.

Both the private practitioner and the health officer have a profound responsibility in educating the people concerning syphilis. Close cooperation between the two in this regard is of first importance. Wherever

education, together with good case finding and proper treatment, has been carried out, the disease has receded. Where the fight has been waged long enough, the disease has been reduced almost to the vanishing point. This should be our goal in Kentucky.

DISCUSSION

Ernest B. Bradley, Lexington: Dr. Caudill sent me a copy of his paper last week. I have read it five or six times in the hope that I could find something controversial about it or something to add to what he has said. I have to agree in this instance with Dr. McCormack, that this is probably one of the most important papers, if not the most important, that will be read before the Kentucky State Medical Association. Of course it is filled with truths and we might almost say platitudes, things that have been said so often, but I think when this paper is published, and I hope it will be published very soon—that every practitioner in Kentucky will read it over again and again.

There cannot be any more important campaign for public health undertaken at this time than the campaign against syphilis. Fortunately the whole country, I might say the whole world, is becoming alive to this problem, and other countries have already shown what can be done, especially some of the Scandinavian countries. Norway and Sweden have reduced the incidence of syphilis enormously in the last five or six years by public education, by the reporting of cases, following up of the contacts, and especially seeking the source of infection. Our new law requiring examinations of those who are about to be married will no doubt disclose a certain number of cases of syphilis, but I think the responsibility for finding these cases and treating them adequately lies with the private physician, the practitioner of medicine, those who see the cases either in the primary or early secondary stages. There are in every community only a few men who see most of the early cases of syphilis. If they are conscientious enough to report the cases so that we will know how much syphilis we have in that community, and then get the aid of the health officer in following up the source of the infection and other contacts and treating those, I think a great deal can be done.

Of course, it is an enormous job. Just think of 11,000 new cases, Dr. Caudill says, in Kentucky every year. It seems almost impossible to believe, but from routine Wassermanns done on admissions to hospitals, which of course have been done for years and years, it is astounding to find the number of cases of syphilis existing, especially in those people who have never known that they were infected.

I think one reason more cases are not more

adequately treated (and Dr. Caudill brought out that point) is the cost of treatment. These young people who acquire syphilis have very little money. I think that the practitioners of medicine, especially those of us who treat syphilis, have got to reduce the price. People who have no money at all can be referred to venereal clinics and get adequate treatment; those who have plenty of money have no trouble, of course, in getting treatment. It is the average man, and probably that constitutes four out of five cases of syphilis, who comes to the doctor and is charged too much for these intravenous injections. In the early days of salvarsan and "neo" they were charged huge prices. In those days it was supposed to be something unusual to be able to give an intravenous injection—we thought we were a little better than other people because we could give these injections and charged accordingly. What was the result? The result was that those patients would get two or three injections of salvarsan or neosalvarsan, say at \$10 to \$25 an injection. They could pay for two or three injections, and then they would stop treatment. They would simply disappear. That was so common as to be the rule rather than the exception. I know that every man here who has treated syphilis has found that to be true. I think we have got to take a chance on making less money for these treatments. Of course the responsibility in treating syphilis is great. When a patient gets an exfoliative dermatitis, you feel you couldn't have charged enough, but as an actual fact the time it takes to give an intravenous injection is almost a minimum. You couldn't take a patient into your office and ask him how he feels today and talk to him for a minute or two quicker than you could get out your syringe and mix up your solution and give him a "shot" and tell him to come back next week. If you could get even fifty cents an injection above the cost of the medicine and get enough patients you could get rich in a few years on account of the small amount of time involved.

That is one thing I want to emphasize, that we have got to charge less or to charge what the patient can pay and make him pay per week. If you are going to wait until the end of the case or try to make him pay in advance, he hasn't the money and he doesn't get treated. He will come for a while and then he gets into debt and leaves, and he may not go anywhere else because he has no other symptoms.

As Dr. Caudill has pointed out, we know the cause of syphilis, we know the way it is transmitted, and we have a remedy that renders the patient non-infective in a few weeks, and there isn't any excuse why we cannot either wipe out syphilis or reduce it almost to the vanishing point.

The education that has been done by the lay press has had a great effect. I know all of you have found, as I have, people coming in who have no reason in the world to suspect they have syphilis, and wanting a Wassermann test made to see whether they have syphilis.

I don't think that doctors are quite sufficiently on the alert even now in suspecting syphilis. Everyone who takes a routine Wassermann on patients for various complaints that have nothing whatever to do with syphilis, finds every year that he has a certain number of positive "blood tests" returned on people who have never known they had any infection. I think this should be a routine, and there is no excuse for not taking them. The blood tests are done for you by the State Board of Health if they are not done by your own private laboratories on people who can pay, so there is no excuse for not making a Wassermann or a Kahn test on every patient you see.

The reporting of syphilis I imagine is done very poorly. I would hate to ask how many men here report the cases of syphilis they see. If I should ask, I think it would embarrass all of us. I couldn't hardly hold up my own hand.

Dr. McCormack says let's see how many men here report. We won't include the tertiary cases of syphilis, locomotor ataxia, and paresis that are not supposed to be infective, but how many men here report early cases of syphilis, primary or early secondary? That is much better than I thought. I should say there were about a fifth of the men here that do it. I don't believe that is true in Lexington; I don't believe a fifth of our doctors do, I am sorry to say. I am one of the sinners. I don't see many early cases, it is true. If they are in a certain class you don't mind reporting them, but in private practice there are some cases you can't report, of course, you don't have to report the names, but if you are trying to find the source of infection the names should be reported. It isn't easy, but that is what has to be done if we are going to stamp out the disease.

A couple of years ago Dr. Dudley Smith, the dermatologist at the University of Virginia, said that if you go at these patients right, (I mean those who come to you with primary and early secondary syphilis, especially primary), you can get them to reveal the source of infection and you can follow back to that source and in a great many instances of course prevent numerous other cases taking place from the same source.

There is no use talking about "adequate" treatment. I think Dr. Caudill has covered every bit of that. I think for this year and for next year, maybe the year after, the syphilis program ought to be the main program

society, of every city in Kentucky, and not only Kentucky but the United States, and I think it should be absolutely the first thought. We have worked on tuberculosis. I don't know how much good has been done by all the tuberculosis program. Of course tuberculosis incidence and mortality has been greatly reduced in the last years, anti-tuberculosis propaganda has done a lot of good. The control of syphilis is only about a tenth as hard; it is practically a cinch compared to the control of tuberculosis. We can treat the cases. We can find the contacts and see that they are treated. We can't make tuberculosis non-infective in a few weeks or in a few months, and often not in a lifetime, but there isn't a case of syphilis that you can't make non-infective. You may not cure them all, you can't get them all well, but you can fix them so that they can't give syphilis to anyone else, and if you can do that enough times you can see that instead of 11,000 new cases in Kentucky every year it ought not to be long until we have only 1,000, and that would be pretty good.

I have seen a good deal of late syphilis. I have not seen very much early syphilis because I don't do that particular kind of work, but the enormous amount of tertiary syphilis and of neurosyphilis that we see just in general practice shows how prevalent it is and has been in the past. I don't know that it is getting so much less prevalent, that I can see, over the last ten or fifteen years. It seems to me just about the same as it used to be, but from now on in the next ten or fifteen years, if we treat these cases adequately, or if we get them treated, of course, we are going to see less tertiary syphilis and less neurosyphilis and less cardiovascular syphilis.

E. R. Palmer, Louisville: Exactly one-third of a century ago began a series of discoveries that have entirely revolutionized the management and treatment of syphilis. First was the discovery of the *Spirochaeta pallida* by Schaudinn and Hoffman in 1905. This was followed fairly rapidly in 1906 and '07 by Wassermann, Neisser and Bruck with the discovery of the Wassermann reaction, and finally in 1910 Paul Ehrlich discovered salvarsan. As the result of these discoveries and the marvelous improvements that have been made upon them in the last twenty-five years, I believe I feel justified in saying that as a purely medical problem the syphilis question has been solved. I know of no other disease in the world of a like severity of which we can say the same. If we would take 100 men here today and get them in the early primary stage of syphilis and give them the proper adequate treatment we could assure those men that 95 per cent of them would never hear of their disease again, could marry

of every health department, of every county and have healthy, normal families and probably die of old age. So it seems to me that we must make the public realize that syphilis is very much more a socio-economic and therefore a community problem. For, as doctors we know if we get hold of these cases at the proper time, through improvements that have been made, the darkfield examination of the early lesions, the improvement on the Wassermann reaction, the Kahn test, the Kline test, and the Eagle test, and with the wonderful improvements in the arsenicals so that there is now practically no danger in their use, they can be controlled and cured. If we can get this thoroughly publicized, we will go far toward eradicating this terrible disease.

There are many things which the Surgeon General, Thomas Parran, has said and done that I know most of us will not agree with, but he will go down in history as the doctor who brought syphilis out of the ash-can, out of the alleys, and made it respectable as it was originally, for syphilis started as an aristocratic disease and was handed down by the kings to the common people. Now Dr. Thomas Parran has put it back where it belongs, and he has led people to see that you must not look for symptoms alone among the lowly and the prostitutes, but that you find syphilis in every walk of life and that everyone should not only be willing but glad to submit to a blood test.

I most heartily endorse the statement which has been made that every pregnant woman should be examined for syphilis, for it is one of the most unfortunate things in the world that we allow a baby to be born suffering from a disease that it has no reason to have at all if we will resort to the early measures that have been presented to us by modern medical science.

Harry Phillips, Louisville: I would like to ask Dr. Caudill whether he considers a two plus Wassermann an active case and whether such a case should be given more treatment.

F. W. Caudill: A two plus Wassermann in itself to me doesn't mean anything. Certainly it should do no more than suggest repeating the test. However, if you have a two plus Wassermann with significant history and physical findings, then it does mean something.

Harry Phillips: If a patient has been treated over a period of two years or more and still shows a two plus Wassermann tested in a recognized laboratory, are we to continue our treatment with that patient, or are we to call him cured and discharge him? That is the point I want to bring out.

G. P. Beutel, Louisville: If a man persists after three years of adequate treatment in having a four plus, would you advise him to take the malaria treatment? He varies; he would

have two plus, three plus, then show up four plus and then drop back to two. Would you advise giving him malaria treatment?

F. W. Caudill, (in closing): I appreciate very much the kindness of those who discussed the paper. I would like to point out that in the year 1937 a little more than 2500 new cases of syphilis, hitherto unrecognized, were found because physicians interested themselves in trying to find them; that is, they were found as a result of effort and interest in case finding. I would like to plead for increased interest in case finding, particularly that you take more interest in finding the sources of the cases that come to you.

I would like to plead for better reporting of the disease, because it is right that the medical profession, charged with the responsibility for the control of this disease, should know the truth about the extent of its existence.

I would like to ask that the private practitioners keep more of the patients in their own practice. The clinics and the public facilities for the treatment of syphilis are already loaded, and the more you load on, the more taxpayers' money it is going to take to treat syphilis. Where at all possible will you keep your cases and adequately treat them.

Dr. Phillips' point is a good one. That is one of the reasons we have changed the plan of making reports on serological specimens, to remove that two plus and three plus thing on which many physicians have heretofore depended in treating their cases. The serologic tests in common use are not quantitative tests. You shouldn't treat a blood test; treat the patient. If you have treated that patient adequately, then of course you should follow him and observe him by taking a blood test once a year. If he has had, say, two years of good treatment and he has a two plus Wassermann, and that Wassermann stays two plus, or maybe fluctuates from two plus to negative, if you are going to use pluses, I certainly would regard him as arrested syphilis. Of course, his spinal fluid should have been checked during treatment.

Answering **Dr. Beutel's** question, I wouldn't advise you to give anybody malaria treatment unless they have symptoms of central nervous system involvement. You should study the spinal fluid by the colloidal gold test and by other desirable serologic tests before you give him malaria. Giving malaria treatment to a patient is a serious thing, in my opinion. **Dr. Gardner** and these syphilologists who deal with that sort of thing can better answer that than I. Again I would say that you don't treat the blood test; treat the patient. I will say to you frankly that most of the authorities say that Wassermann fast patients are Wassermann fast

because they received inadequate treatment early in the disease. It may also mean that they have undiagnosed central nervous system syphilis.

MODERN ANESTHESIA*

E. W. NORTHCUTT, M. D.

Covington.

Without question more progress has been made in anesthesia in recent years than in surgery. Much of the progress in surgery has been made possible by new developments in anesthesia.

Much experimental work has been done in the anesthetic field during the last few years and a number of new preparations have been developed for inhalation, intravenous and local use. With some of these I have had no personal experience.

Several factors should enter into the selection of an anesthetic—always with the patient the primary consideration. One must consider the location of the operative procedure—for example, we do not advise spinal anesthetic for operations above the diaphragm. As pentothal sodium and evapal are broken down in the liver it is best to avoid these preparations where there is liver damage. Some of the inhalation anesthetics are unsafe where there is an open flame or a cautery is being used in the operation. Ether should be avoided where there is kidney damage.

There is still no ideal anesthetic for the very poor risk patient. There are many different anesthetics used today and various combinations of these in the so-called balanced anesthesia. In the hands of well trained anesthetists balanced anesthesia is usually a very satisfactory one.

Drop ether by the open method remains a comparatively safe anesthetic, it can be fairly well controlled, it is often the only one available. If for some reason one prefers gas anesthesia in an abdominal operation, novocain block may be used to secure better relaxation. After the incision is carried down to or through the fascia, the injection may be made directly into the abdominal wall.

Spinal anesthesia gives remarkably good relaxation. Respiration is usually quiet. It is valuable in suspected intestinal obstruction. The sphincter ani muscle is supplied by the sacral and the inferior hemorrhoidal branch of the pubic nerve. The sympathetic nervous system extends from the D-1 to L-2. That supplying the abdominal viscera

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begins at D-10. The sympathetic nervous system inhibits peristalsis. The pneumo gastric is a cranial nerve: it supplies a large part of the alimentary canal and stimulates peristalsis. Spinal anesthesia anesthetizes the inhibitory sympathetic but does not reach the vagus, thus leaving it unopposed in its action. We have the relaxed sphincters with increased peristalsis, hence its indication in suspected obstruction. Occasionally an operation will not be necessary, stimulation of the peristalsis and relaxation of the sphincters being all that is required to relieve the condition.

We are all familiar with local anesthesia in the handling of fractures. This has been one of the most practical and useful developments in the field of anesthesia in recent years. From 1-2 per cent to 2 per cent solution of novocain is used, the more concentrated solution being used in the smaller bones. The solution is injected directly into the site of fracture. Before the injection is made the piston of the syringe is withdrawn repeatedly as the needle is maneuvered about until blood enters the syringe. This will insure the solution reaching the fracture ends. This method is superior to any form of general anesthesia because it gives good relaxation, it usually lasts an hour or longer, and the patient being awake, can assist in the manipulation of his fracture. Again, the patient may be in no condition to withstand a general anesthetic. It cannot be used to advantage in large compound fractures with extensive damage to the soft tissues necessitating debridement and possibly plastic procedures.

During the last few years much attention has been given intravenous anesthesia. Sodium amytal was one of the earliest preparations used. Several definite objections soon became apparent and caused it to fall into disuse. First, it did not give sufficient relaxation—often it was necessary to supplement it with some other form of anesthesia. Second, the period of recovery was too long, this period was often one of considerable anxiety and not without danger. One could not be sure always whether this unconsciousness was due to the anesthetic or due to some real intracranial pathological condition such as cerebral oedema.

About 1933 a preparation was produced to which the name evapal was given. Its action is prompt, unconsciousness supervening usually within a few seconds. Recovery is also rather prompt following discontinuation of the drug. Occasionally there is twitching or even convulsive movements. Recovery is sometimes delayed. More recently another

preparation has been developed, known as pentothal sodium. The action of pentothal sodium seems to be smoother and more reliable than that of evapal, recovery is somewhat shorter. These drugs are contra-indicated in persons in whom there is liver damage.

In a patient urgently needing fluids and requiring immediate operation, pentothal sodium has some advantages. First, the lapsed time before the operation is actually started can be materially reduced. Second, the patient can be prepared for operation and draped before the anesthetic is started because the patient goes to sleep quickly and without struggling. Third, the anesthetic can be withheld until he has had sufficient fluids to render him a better operative risk, then the pentothal sodium may be injected directly into the rubber tube close to the intravenous needle. This is a simple procedure and saves injecting another vein which may be no little task at a time when every minute counts.

In administering this anesthetic certain important points should be kept in mind. First, administer it slowly and watch the patient constantly, pulse, respiration and blood pressure. After the patient is unconscious the needle is kept in place and just enough is given to maintain this state. By this procedure the anesthetic is controlled and one has a good margin of safety. Second, special attention should be given the respiratory tract to be sure it is free and unobstructed at all times.

A case in point may emphasize the importance of this. When we first began using this drug a muscular middle age man was brought in with a dislocation of his right hip. We were then using evapal and decided to use it in this case. After the writer discussed at length with the intern the importance of a clear air passage we proceeded to give the anesthetic and reduce the dislocation which was done easily. In our enthusiasm over the way the drug acted we forgot our patient for a moment and when we looked at him again he was about the color of a very ripe Concord grape. We spent a very busy and anxious half hour resuscitating him. It should be one person's job to watch the patient's condition and keep the air passages free, and this person should understand his job and realize its importance.

Some have advised against its use in debilitated persons or persons in shock. As has already been said no anesthetic is ideal in these cases. However, pentothal sodium properly given probably carries no more immediate risk than any other anesthetic and

the post operative complications are fewer. We have used it in ruptured tubal pregnancy with active hemorrhage and the patient in collapse—the lapsed time from starting the anesthetic to completion of operation was less than 15 minutes. This is probably no longer than it would take to anesthetize a patient by any other method. Among other types of operations we have done may be mentioned Caesarian section (hemorrhage the indication) amputation of breast, appendectomy, caecostomy, colostomy, resection of colon, large strangulated incisional hernia following multiple operations necessitating intestinal resection, and requiring approximately 2 1-2 hours to perform, manipulating fracture of hip and applying cast, manipulating and nailing fracture of hip, manipulating fractures and dislocations and various minor procedures.

While we yet have no so-called “ideal” or “fool proof” anesthetic, several useful and comparatively safe anesthetic agents have been developed, and those working in this field have been well rewarded.

DISCUSSION

John W. Heim, Louisville: First I want to agree with Dr. Northcutt that there is no ideal anesthetic. All of them have their contraindications and also their dangers, as Dr. Northcutt has just brought out so forcefully. I think that we are likely to be too enthusiastic about modern or newer anesthetics. They also are dangerous and probably have to be watched even more closely than some of the older anesthetics. I also agree with Dr. Northcutt that ether is a safe anesthetic, probably the safest anesthetic on the table, but it lowers the patient's resistance and there is considerable nausea and vomiting following its administration and it is contraindicated in diseases of the respiratory tract and diseases of the kidneys. For these reasons, modern anesthesia has shown a tendency to get away from ether somewhat in favor of the gases.

Cyclopropane is one of the newer anesthetics and has become the most popular of the gas anesthetics in the last few years. It produces more relaxation than either nitrous oxide or ethylene. It is pleasant to take and there is little or no nausea following it. A great advantage is that it can be given with an abundance of oxygen. This fact makes it the safest anesthetic in debilitated, anemic and thyroid cases. It is contraindicated where there is a cautery or X-ray being used because it is explosive. However, it is not as dangerous in this respect as ethylene, as it sinks to the floor and is heavier than air, while ethylene has about the same specific gravity as air and diffuses rather evenly.

The intravenous anesthetics, evapal and pentothal, are very pleasant to the patient and there is no nausea following their administration, but they are variable in action and in many cases you cannot get relaxation, but spasm of the muscles.

I hesitate to give an intravenous anesthetic if I can give an inhalation anesthetic, because inhalation anesthesia is more controllable and, I think, safer.

Avertin rectal anesthesia also is one of the modern anesthetics. I have not used avertin as a complete anesthetic, but I do use it as a basal anesthetic by giving just enough to put the patient to sleep in the room and then supplement it with cyclopropane in the operating room. This works very nicely in very nervous cases and in thyroids. This is a very good way to steal a goiter. Go in the room about thirty minutes before the operation and tell the patient you are going to give them a medicine that their doctor ordered, that will quiet them, and you give them avertin per rectum and as a rule they go to sleep in about ten minutes and don't know they are going to the operating room. They don't know they have been operated on until they awaken, and they sleep several hours after the anesthetic. This has another advantage: you don't have to give as much gas.

Spinal anesthesia is not a new anesthesia. It was given many years ago and discarded on account of the danger. Cocaine was used at that time. But recently spinal has been revived and improved by using some of the newer and safer drugs. Nupercaine is probably the safest, as brought out at this meeting day before yesterday by Dr. Lahey. I use spinal when inhalation anesthetics are contraindicated or when a patient refuses to be put to sleep.

When you give the whole dose of any anesthetic at one time you necessarily increase the danger. If a patient does badly under inhalation anesthesia, and the administration is stopped, they eliminate some of the anesthetic with every respiration, whether it is due to the effort of the patient or whether it is artificial respiration. This is not true of intravenous, rectal, or spinal.

Dougal Dollar, Louisville: I agree with Dr. Heim, however, that I think cyclopropane has been one of the greatest advances that has been made in modern anesthesia. In all our cardiac cases where the heart muscle has already been depleted, the large amount of oxygen that we can give with that anesthetic certainly adds to the safety, and the cardiologists in Louisville have come to request that in nearly all cases where we work.

The use of avertin as a basal anesthetic in thyroids and nervous and apprehensive patients is excellent; I don't think there is anything that can even compete with avertin. It certainly has

a wide margin of safety, and in the thousands of cases in which we have used it in Louisville in the past twelve years we have had no reason to regret its use and we have had no complications and no irritation of the rectum or anything else from the use of avertin. We always give it as a basal and never give it as a complete anesthetic.

The use of pentothal sodium intravenously is certainly a beautiful anesthetic from the viewpoint of the patient and the surgeon who is going to work. The patient goes to sleep very quickly without any sensation of anything except drowsiness and awakes in the same way. Nausea is almost unknown following the use of pentothal, but I would hesitate to use it for long anesthetics, and I think that the work that is coming out this fall will certainly condemn it for anything excepting anesthetics that are not going to run longer than twenty or thirty minutes.

The use of high spinal anesthesia is another thing that is constantly brought up, that is the use of spinal anesthetics for anesthesia above the diaphragm. In my own work I have given a great many anesthetics for rib resections, pneumonectomies, lobectomies, drainages or empyema, and where respirations have been markedly interfered with and inhalation anesthesia was a thing almost out of the question, and in all those cases I have had no reason to regret its use. We have had perfectly satisfactory anesthesia and I have had to do very little stimulation in these cases.

Another form of anesthesia that was not brought out this morning that I think is of great help in modern surgery, especially in chest surgery, is intra-tracheal anesthesia where you put a catheter down into the patient's trachea, inflate a balloon around it, and then through this catheter you have a means of constant suction to keep the trachea free from any of the secretion from the chest, or you can put the catheter down into one bronchus, right or left, and block off one lung and leave the diseased lung free to work on. In doing pneumonectomies for conditions where there is a large discharge of secretion constantly coming into the trachea, it is certainly a wonderful advance in anesthesia.

One other point that I would like to take up is this, that I think the preparation of all these cases for anesthesia, wherever it is feasible, should be in the hands of the anesthetist and not in the hands of the surgeon. So many times drugs are ordered for these patients and the full effect of the drug is not obtained when the patient comes to the operating room, making for slow induction. The atropine is not given early enough so that the secretions are

dried up. And I think that is entirely in the field of the anesthetist. Wherever possible I think they ought to have the opportunity of seeing the case beforehand.

[The use of pentothal because of rapid induction is something that doesn't bother anybody who uses cyclopropane, because I don't know of any instance where in the emergency of a ruptured ectopic or rupture of the uterus causing severe hemorrhage, or any other condition where the surgeon has occasion to get into the abdomen quickly, the anesthetist can't have the patient thoroughly relaxed and ready for the surgeon to work within a period of five minutes at the outside.

E. W. Northcutt, (In closing): As I said at the outset, I am not an anesthetist so I have a good way out. I quite agree with Dr. Dollar in that the anesthetist should be given the liberty of pre-medication, of observing the patient pre-operatively if he will.

As I said, I have not had personal experience with some of the anesthetics. Cyclopropane is one. I have seen it given and it seems to work beautifully. I should like very much to use it in our hospital but they are afraid of explosions. We have had several explosions when it was mentioned.

In thyroid work I usually use some barbiturate and local. This gives the patient the opportunity to talk, to cough any time you want him to, without waiting for him to come out from under the anesthetic and at the same time it fortunately takes the anesthetist out of the field.

As to the relaxation from pentothal, I believe any anesthetic that will relax a powerful, muscular man sufficiently to reduce a dislocated hip is fairly good relaxation. As to the time pentothal anesthesia can be continued, I think it cannot be condemned too strongly as to time, if it can be used in a person for instance, weighing quite 300 pounds, who had been vomiting for six days, with a large strangulated hernia necessitating resection of the intestine. Of course the work that is to come out may disprove all that, but that patient is still living in spite of that.

New Gold Salt for Arthritis.—Hartfall and his colleagues used methyl glucamide of aurothiodiglycollic acid, the total gold content being 50 per cent, in the treatment of fifty cases of rheumatoid arthritis. The dosage has been approximately half that previously used with other gold preparations but the curative results have been equaled or surpassed. Toxic reactions occurred in a fourth of the patients.

PERITONITIS: RECENT ADVANCES AND TREATMENT*

G. Y. GRAVES, M. D., F. R. C. S. E.

Bowling Green.

Peritonitis is one of the most dreaded of all complications in abdominal surgery. It is also one of the most difficult to treat. It is not a condition that can be treated by a set of rules. Every case must be individualized. Nowhere else in surgery does the judgment of the surgeon play so vital a part.

Perhaps it is a trite statement to say that the best way to treat peritonitis is by the prevention of it. Seventy-five percent of peritonitis cases could be prevented either by the patients seeing their doctor earlier and by following his advice, or by the doctor recognizing the fact that a relatively simple condition, if not corrected, may terminate in peritonitis.

The physicians in Philadelphia have made an important advance in the prevention of peritonitis. By educating the public as to the dangers of self-medication, especially against the use of laxatives, in the presence of abdominal pain, they have reduced the mortality rate in appendicitis from 5.97 per cent to 3.44 per cent. Bower made the statement: "If a publicity campaign of increasing intensity can be waged against delay in hospitalization and the abuse of laxatives, in 1940 spreading peritonitis will be as rare in our Philadelphia hospitals as cases of typhoid fever are today." In a search of the records of 57 perforated peptic ulcers admitted to the Royal Infirmary in Glasgow, Scotland, I found that almost 50 per cent of them had either no treatment or had only the sketchiest of medical treatment before the catastrophe. Instances like this could be multiplied many times. They only show the necessity of educating the public as to the dangers they run by self-medication. We must also fight the tendency of delay in hospitalization. A doctor must not yield to the plea of the patient to wait until the next morning and if the patient is not better, put him in a hospital.

We cannot so easily shift the responsibility to the patients for all cases of peritonitis. In looking over my records I find three types of doctors referring me cases:

1. One who made a prompt diagnosis of the condition and insisted upon prompt treatment.

2. An occasional man who was too enthusiastic over the diagnosis of appendicitis and called all pains in the abdomen appendicitis and insisted upon operation.

3. An occasional doctor who never referred an uncomplicated case of appendicitis but all of whose patients came in with abscess or general peritonitis.

The first is the ideal type.

The second was not responsible for any deaths in this series but occasionally made it a little hard for the surgeon in trying to avoid unnecessary operations. Most of this man's patients could be kept in the hospital a few days and sent home without any damage to the patient, or harm to the prestige of the practitioner.

The third group should be sent back to school, for they are responsible for most of the deaths that occur in the series. Their habits of treatment and their mental approach should be examined to avoid the errors that they consistently make. Not often but occasionally they prescribe vigorous purgation. Usually they would see the patient and give him a large dose of Morphine and leave without making a diagnosis.

If in two or three days the patient had not recovered, the doctor was called back and found an abscess or peritonitis. These he immediately recognized as appendicitis. To him, apparently, the symptoms of appendicitis were those of distention, abdominal mass, nausea and vomiting, a very fast pulse rate, and an extremely ill patient; or, if he recognized the illness as appendicitis at first, he was inclined to wait and see if the patient wouldn't recover without operation. Of course, some of these did but many of them went on to abscess formation and general peritonitis.

Any general practitioner who finds that the majority of cases of appendicitis that he sends to the hospital have already developed abscesses or general peritonitis should feel very much humiliated, for he is not doing his duty to his patients and he can feel that he alone is directly responsible for the death of several people a year either through his ignorance or procrastination.

The prevention of peritonitis, post-operatively, is the responsibility that rests directly upon the shoulders of the surgeon. Pflaum in "One Thousand Cases of Proven Peritonitis" found that 22 per cent of all the deaths due to peritonitis arose after operation. Most of these followed operation on the gastro-intestinal tract, and, while all can not be prevented, every effort should be made to minimize the number of cases. Operations that can be done in relative safety in the upper portion of the gastro-intestinal tract may prove fatal in the lower portion, because the contents of the lower intestine are extremely septic, and the extreme irregularity

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of the contour of the larger bowel makes accurate anastomosis difficult. This, associated with poor blood supply and slow healing, makes the complication of peritonitis a dreaded one. In operations upon carcinoma of the stomach, the giving of a dilute solution of hydrochloric acid will tend to diminish the number of the bacteria in the stomach and make the operation safer. The resistance of the patient should be improved by pre-operative diet, transfusions of blood, and a restoration of water and electrolyte balance.

Operations upon the large bowel, especially in the presence of any obstruction, should be done in stages. A blind cecostomy in the presence of obstruction is best, for any exploration or handling of highly-infected lesion of the bowel may result in the breaking into the abscess or result in peritonitis.

It is a well-known fact that the peritoneal cavity will tolerate a second operative procedure better than the first. This cecostomy not only gives rest to the large portion of the intestine by diverting the highly-infectious fecal current, but permits cleansing of the bowel by irrigation before the resection, and ample time for the building up of the patient by the methods mentioned above.

Numerous substances have been injected into the peritoneal cavity before operation for the purpose of establishing local immunity. Vaccines made from colon bacilli, and streptococci, amniotic fluid extracts, Sodium Ricinoleate, and Dextrose solutions have been used. Clinically, they have not come up to the expectations of their sponsors. Frequently the injections of vaccines caused such a severe reaction that it was necessary to postpone operation until patient had recovered from the reaction. Besides later operation in presence of this exudate and inflamed peritoneum might be made more difficult.

The colibactragen of Steinberg seems to me to be the best of these. By his new technique, it is possible to place it in the abdomen at the finish of the operation as it brings out an immunity response in about three hours. The use of colibactragen in the presence of peritonitis is of no real value as it has been found that after the toxins are already developed, they seem to inhibit the phagocytosis of bacteria by the leukocytes.

Although various substances have been introduced into the abdomen at the time of operation on the patient with peritonitis, this seems to me to be irrational and meddlesome. I know that in the patient with established peritonitis, it is impossible to kill all the bacteria by antiseptics and the stronger the antiseptic placed in the patient, the more damage is done, because it not only kills the

bacteria, but destroys the protective powers of the individual. Incidentally, in the peritoneal cavity the use of strong antiseptics can be followed with very dense adhesions.

One of the biggest advances in the treatment of peritonitis is the better selection of cases for operation. Needless to say, this requires careful judgment and there is no rule of the thumb that can be applied to them. Up to 1936 it was my practice to operate on any case of acute appendicitis, whatever the stage, as soon as admitted. During this time we had 265 cases of appendicitis; 206 unruptured; 24 with abscess formation; 25 with generalized peritonitis. In addition to the 25 cases of generalized peritonitis due to ruptured appendix, we had 4 cases due to other causes. Since 1936 we have tried to select our cases for immediate operation or for delayed operation with more care. We have had 217 cases of appendicitis; 160 unruptured; 37 with abscess formation; 20 with generalized peritonitis upon admission. In addition we have had 4 peritonitis cases from other causes.

The mortality rate for generalized peritonitis before 1936 was 28 per cent. Since 1936 it has been 12 1-2 per cent. This we believe due to better principles of treatment. Before 1936 we lost 4 cases of abscessed appendicitis in a total of 24. This high rate we believe due to our excessive enthusiasm in trying to remove all the appendices. Since 1936 we have had 37 cases of abscess formation with 1 death. Many of these with abscesses were peritonitis cases on admission which had been localized with the treatment mentioned below. We have had no deaths in the unruptured appendix cases.

While our death rate is not as low as that reported by some of the other men, we do not feel ashamed of it, as we have tried to divide our cases so that the generalized peritonitis can be distinguished from localized peritonitis. We believe that some of these low mortality rates probably do not make the distinction clear.

We believe that all unruptured cases of acute appendicitis should be operated upon immediately. All cases of gonorrheal, pneumococcal and primary streptococcal peritonitis, if diagnosed, and all cases of well-advanced generalized peritonitis as a result of a perforation of a hollow viscus should be treated expectantly and only operated upon after definite localization has occurred.

Between these two extremes there is a large group that may or may not be operated upon immediately. This group includes spreading peritonitis, localizing peritonitis, and definite abscess formation. It is in this

group that the really difficult decisions are made. Sometimes it is very hard to differentiate these stages.

If there is any doubt in my mind as to whether the appendix is about to perforate, or has perforated, I operate immediately. Any definite abscesses are operated upon within a few hours of admission, these few hours being taken to get the patient in better condition.

In the localizing cases and in the spreading peritonitis cases frequently several hours may be consumed in deciding whether it is better to operate or treat expectantly. If the pulse and temperature begin to fall and the patient begins to improve, operation is usually deferred for several days. If the pulse rate is rising and the patient is obviously not doing well upon expectant treatment and we can make a definite diagnosis as to the focus feeding the peritonitis, we believe the patient should be operated upon with a minimum of surgery, i. e. either removal or closure of the focus; or if this should prove too hard, drainage under a local anesthesia.

By expectant treatment we mean, essentially, a modification of the old Ochsner form of treatment. We do not believe this can be carried out in the home. It must be done in a first-class hospital and requires a maximum of care. Attention to detail is essential for success.

Nothing is given by mouth. If there is distention, pain, or vomiting, the Wagensteen Duodenal Suction Apparatus is applied. Recently we have been experimenting with continuous suction through the Miller Abbott Tube, which we believe will be an improvement over the Jutte Tube, for it is possible to drain the distended coils of the intestine better with this tube.

Five percent Glucose and Normal Saline are given intravenously or by hypodermoclysis in quantities sufficient for urinary output of 1000 cc. daily. If the patient has vomited a good deal or apparently lost much chlorides, 1% Saline or stronger, may be given intravenously to replace the loss. If Glucose stronger than 5% is given, Insulin must be added in proportion of one unit to two to three grams of Glucose to prevent an ileus. Morphine, grains 1-4 to 1-6, is given often enough to keep the patient comfortable. This is given every four hours unless it depresses the respiration too much. It promotes intestinal tone and at the same time keeps the patient more comfortable and quiet.

Fowler's position is used because until the peritonitis becomes localized, the fluid will tend to gravitate into the pelvis. Also in

this position the patient has a greater vital capacity. However, unless closely watched, many of the patients will slump down in bed so that the so-called Fowler's position will be a disadvantage to them.

Heat is applied to the abdomen either in the form of an electric light cage or turpentine stoops, because we believe this creates hyperemia and tends to empty the splanchnic area of stagnant blood. Theoretically, it is supposed to maintain a better tone of the intestine.

We give Prontosil 10 to 15 cc. every four hours until definite symptoms of toxicity occur, then the dose is reduced.

Frequently after several days of this sort of treatment, the patient's pulse and temperature will begin to fall and he will become more comfortable and the infection will localize.

We have not carried out this expectant form of treatment to the ultimate end but operate upon the localized abscesses when they occur.

Certain features of operative technique in the dealing with peritoneal infection are rather important. To the lack of application of these principles can be traced two deaths in my first series of cases, both of fairly-well localized abscesses. The patients entered in fairly good condition and were operated on immediately. In the operation the abscess was drained, and it was an easy task to remove the appendix by breaking down a few adhesions. As a result of breaking this protective wall, both patients died of a spreading peritonitis.

Now my plan of dealing with an abscess is to plan the operation so as to open directly down upon the abscess, if possible, in such a way that the free peritoneal cavity is not traversed. Under local anesthesia an incision is made over the most prominent part of the bulge and is carried down to the peritoneum. An area of edematous peritoneum is selected as the abscess is usually under this. The induration is carefully palpated and the incision is made through this indurated, edematous area. Frequently only the abscess cavity is seen. Then the pus is removed by suction and if the feeding focus can be easily removed or closed, this is done. Every effort is made to keep the surrounding adhesions intact. The patient is instructed, above all things, not to strain, as this may shoot an uninfected coil of intestine into the infected field, thus spreading the peritonitis. Penrose drains are then inserted, the peritoneum closed, and the rest of the wound very loosely closed with silk worm gut or steel alloy sutures. If the abscess cavity is dirty and

stinking and especially if the patient has a fat abdominal wall, the sutures are introduced through all layers down to the peritoneal cavity, the wound packed open, and then the sutures tied with bow-knots, so that when the infection is overcome, the wound edges can be drawn together.

The patient is then given 30 cc. perfringens antitoxin. If it is possible to drain the abscess through the vagina, this is done.

If the patient is operated on during the spreading stage of peritonitis, the incision is made over the original focus, the abdomen opened, the exudate removed by suction, and drains placed down to this area.

If a pelvic peritonitis is operated on by mistake, the exudate is removed by suction, the pelvic organs not touched, and the abdomen closed tightly.

The post-operative treatment is essentially the same as the expectant treatment outlined above.

CONCLUSIONS

1. Education of the public as to the dangers of self-medication, the taking of laxatives in the presence of abdominal pain, and late hospitalization.

2. Education of the doctor in an accurate diagnosis and insistence of early operative treatment.

3. The better selection of cases as regards to immediate or delayed operation.

4. The use of the principles of duodenal drainage by a duodenal tube with suction.

5. The importance of combatting dehydration and hypochloremia; the maintenance of nutrition by the use of Glucose and Saline intravenously and subcutaneously.

6. The use of Prontosil and Sulfanilamide to combat infection.

7. The recognition that certain peritoneal infections might be anaerobic in nature, and are best combatted by the use of perfringens antitoxin.

8. The open treatment of the wound may be a vital factor in lessening post-operative wound infections and death.

9. Doubtful: Preoperative use of various substances to increase the immunity to the peritoneal infections, of which colibactragen is probably best.

DISCUSSION

E. L. Henderson, Louisville: I heartily agree with the essayist that much could be accomplished by an educational campaign to teach the public the danger of self medication, especially the use of purgatives in the presence of abdominal pain.

I think that I can honestly say that at least 95 per cent of the cases of ruptured appendices

seen by me have had purgatives. It is interesting to note that out of 100 deaths from acute appendicitis, according to the cause of death on the clinical histories and death certificates, approximately 80 per cent die from spreading or general peritonitis; approximately 11 per cent from local peritonitis and about 9 per cent from other causes.

I too believe that often a local peritonitis or an appendiceal abscess is converted into an operative, induced, general peritonitis. I believe this is especially true in cases of ruptured appendices that are walled off and where the surgeon is too anxious to get the appendix out. These cases should be drained, and the appendix removed at a later date if necessary. The part radical surgery plays in the high mortality, especially the search for and the removal of the appendix in the presence of localized process, is too great, and this applies to other conditions in the abdomen as well.

Of course, the removal of the septic focus or focus of infection where it can be done without danger of soiling the cavity is advisable, to be followed by drainage. The patient with peritonitis is often very critically ill, and it is best not to do any more surgery than is absolutely necessary. If these cases are treated conservatively, very critically ill patients can sometimes be brought through safely, and the same applies to pelvic infections. Often a serious pelvic peritonitis if treated conservatively will localize and can be drained below through the vagina.

After general peritonitis has developed, it is always a very critical condition, and I know of no condition that is more trying to a surgeon's skill and judgment. It is most important to thoroughly deflate these patients and to keep them deflated if possible. As peritonitis develops, the intestinal tract becomes distended with gas and fluids secreted by the stomach and intestines as well as by the accessory secretions such as bile and pancreatic juice. The muscle wall loses its tone, thins out, and the blood vessels become occluded. A comeback is then impossible without help. When the intestinal pressure is relieved, the walls thicken, the blood vessels dilate, and the circulation is reestablished. The muscle tone may be reestablished if not too badly damaged.

We prefer to deflate these patients by passing a duodenal tube through the nose, and then with continuous use of the Connell suction apparatus with rather frequent flushing with bicarbonate of soda solution. This will not only keep the stomach empty, but will keep the small intestine deflated and will prevent vomiting. We never wait for vomiting before instituting deflation, but start it early. We sometimes resort to an enterostomy or a cecostomy at the time of operation if there is great distention, and I

am sure that often it is of great help if done early. I have sometimes seen this resorted to in the last stages when the patient is in dying condition, and of course, it can not be expected to help in this type of case.

One of the most important items in the treatment of these cases is the maintenance of the proper body fluids or as near as possible the normal fluid balance. We prefer the use of saline and glucose solutions, which may be given intravenously or subcutaneously. We formerly used the method recommended by Dr. Hendon, venoclysis or the continuous intravenous method. However, more recently, we have discarded this method, believing it not necessary; and that it causes considerable inconvenience and limits to a certain extent the movements and the handling of the patient.

By the use of glucose and saline, we not only maintain the proper fluid balance but supply food and chlorides as well. I disagree with the essayist that it is necessary to use insulin whenever using more than a 5 per cent glucose solution, as the average patient, unless he has an excessively high blood sugar or is diabetic, does not need insulin. We frequently use 3000 or 4000 c.c. of 10 per cent glucose during 24 hours and do not use insulin unless some special indication for the same is present, since glucose in febrile conditions is readily utilized. It is more difficult to maintain the proper fluid balance in these patients in extremely hot weather.

The use of drugs in these patients must be governed entirely by the patient's condition—that is, using only those drugs which are specific such as for cardiac support, and in the case of sulphanilamide. It is always advisable to give sufficient morphine to keep these patients comfortable and quiet. It has been demonstrated that morphine does have a direct effect upon the intestinal tract. Complete rest of the gastro-intestinal tract is absolutely necessary, and this can best be obtained by intestinal siphonage and by the use of morphine.

We believe the use of pituitrin or pituitrin like drugs together with frequent enemas is unwarranted and dangerous and condemn their use. However, we believe that by the use of physostigmin like drugs in small doses good intestinal tone can be maintained. It is sometimes necessary to use other drugs as a supportive measure. However, we never use vaccines, serums, bacteriophages, and other such substances unless there are specific indications.

John W. Scott, Lexington: Since the question of glucose has come up it seems to me that some comment upon glucose metabolism would not be out of order. My belief is that we are wrong when we think of glucose as in hypertonic solution, no matter what the concentration is. The question of whether it is isotonic

or hypertonic is a factor of the speed at which it is injected. One can inject a 15 per cent or 20 per cent solution of glucose at such a rate that it has no dehydrating effect whatever. If it is put in so rapidly that glucose is spilled into the urine, each gram takes with it about 10 cc. of water, so it is actually a dehydrating agent when it is given in larger amounts than can be absorbed. That all goes back to the study of Woodyatt and his co-workers more than twenty years ago in which they showed that 0.8 gram of glucose per kilogram of body weight was the almost fixed amount which was taken up parenterally by the animal organism. When that rate is exceeded, glucose is spilled. When it is spilled it takes water out with it.

As to the question of insulin, I agree fully with Dr. Henderson in his position that insulin is not desirable as an adjunct to the use of glucose, after operation or any other time in the non-diabetic. Particularly is this the case if the liver is diseased, since such a liver stores glycogen poorly and liver glycogen and nothing else must maintain the level of blood sugar in the fasting animal, or, in other words, in patients such as these. Insulin actually depletes the liver of glycogen and, even in the presence of an intravenous supply of glucose, increases the danger of hypoglycemia which is already a serious menace in these patients.

WALDEYER'S RING*

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Louisville.

The leading German anatomist of recent times was Wilhelm Waldeyer (1836-1921) of Hehlen, Brunswick, a pupil of Henle and Professor at Berlin about 1883. Many famous men were in his classes and it is said that he lectured to 20,000 students in a decade. Waldeyer made important researches on the development of cancer (1867-72), retroperitoneal hernia (1868), ovary and ovum (1870), the topographical relations of the pregnant uterus (1886), pelvic viscera (1892), and pelvis (1899), and the Neuron theory (1891), to which he gave the name. He first described the open ring of lymphoid tissue formed by the faucial, lingual, and pharyngeal tonsil (1884), which is now regarded as a prominent portal of infection.

ANATOMY: Referring to the anatomy of the throat the pharynx is divided into three portions, the nasopharynx, which is the part above the free margin of the palate, the oropharynx, which is the part extending from the margin of the palate to the top of the epiglottis, and the laryngopharynx, which is the part posterior to the larynx. Waldeyer's Ring is contained in the nasopharynx and

*Read before the Jefferson County Medical Society.

oropharynx. In looking into the vault of the pharynx with the laryngeal mirror we see the posterior portion of the septum, the posterior nares, the orifices of the eustachian tubes, the fossa of Rosenmuller and the mound of lymphoid tissue or adenoid on the vault. The adenoid may be a large soft mass in the median line or it may cover the whole vault of the pharynx, covering partially the posterior nares and extending down obstructing the eustachian tubes. The nasopharynx has a rich blood and lymph supply. The lymph vessels drain either into the retropharyngeal glands or into the posterior or external group of the deep lateral chains in the neck. The retropharyngeal glands of Henle are situated on each side of the median line between the mucous membrane of the pharynx and aponeurosis over the bodies of the second and third cervical vertebra. These glands receive lymphatics from the posterior part of the nasopharynx, middle ear and eustachian tubes. This may explain the cases of arthritis of the cervical spine found so frequently in association with a chronic nasopharyngitis. This explains also the cases of retropharyngeal abscess which are rare but extremely dangerous.

Referring again to the adenoid. In children and young people the adenoid is rather soft and friable with finger like processes with crevices in between. In older people it is harder, smoother and contains more or less fibrous tissue.

In the oropharynx we see small scattered lymphoid masses sometimes in the middle of the throat but mostly along the side walls just posterior to the posterior pillars. Also here we find the faucial tonsils contained between the anterior and posterior pillars which are made up of the palato glossus and palato pharyngeus muscles. The tonsil is encapsulated with the exposed surface containing crypts which extend down to a fibrous capsule where they end blindly. These channels are lined with squamous epithelium. The blood supply of the tonsil comes from branches of the maxillary, the pharyngeal and the lingual arteries. The lymphatic drainage of the tonsils has been worked out by George B. Wood. The tonsil gland is described as one of a group of deep cervical glands and lies just under the anterior border of the sternomastoid muscle. When enlarged it is dislocated outward and forward presenting at the angle of the mandible. The lymphatic glands of the neck are arranged as follows: as a group of collecting nodes that form a kind of collar about the upper portion of the neck, second, two descending chains of glands on each side of the neck

shaped like an inverted V with the apex of the group lying just below the tip of the mastoid and under the sternomastoid muscle. One chain extends down the neck under the anterior border of the sternomastoid, the other chain follows the posterior border. In primary tuberculosis of the glands of the neck there is usually involvement of both the anterior and posterior groups. Dowd found in 86 per cent of his cases the oldest lesion is in the so-called tonsillar gland. The lingual tonsil is the mass of lymphoid tissue at the base of the tongue usually flat and hardly noticeable but at times may be swollen almost to the size of a tonsil.

PHYSIOLOGY: As to the function of the tonsils, adenoids and other lymphoid tissue in the throat, it is assumed that it is part of the mechanism for the protection of the lower air passages against infection. Some men have advanced the theory that they have some effect in altering the activity of the ductless glands, especially the thyroid and pituitary. There are three protective agencies in the upper air passages, the mucous secreted by the mucous membrane of the nose and trachea, the ciliated epithelium of the nose and trachea and Waldeyer's Ring of lymphoid tissue together with the cervical lymphatic glands. Under normal conditions over a liter of mucus is secreted every 24 hours by the nasomucous membrane. The amount of dust and number of bacteria in the air in large cities is enormous. It has been estimated that from fifteen to twenty thousand bacteria enter the nose during an hour's quiet respiration. The ciliated epithelium aids in cleaning out the accumulated dust and bacteria. The importance of lymphoid tissue and the cervical chain of glands as a protective agent for the lungs and gastro intestinal tract cannot be over estimated.

F. Harbitz in 1905 made a careful study of the glandular system in a large number of individuals coming to autopsy. Cervical glands that were clinically, grossly and microscopically normal were found by inoculation test to contain pyogenic organisms and in a few instances virulent tubercular bacilli.

FOCI OF INFECTION: From the anatomical description of the pharynx it can be readily seen that the lymphatic tissue can serve not only as a protective agent but also as a focus of infection. The extreme vascularity of the pharyngeal walls favor rapid absorption of toxic material. The naso-pharynx is usually the first portion involved in air borne infections. The adenoid may constantly harbor bacteria which may be the cause of a sinusitis, a middle ear abscess with its mastoid and brain complications, a retropharyngeal ab-

secess, an arthritis of the neck and many other infections. The faucial tonsil may cause a great many diseases with which you are already familiar. That certain forms of infectious diseases follow closely on tonsillar affection, the same micrococci existing in the former as in the latter, and hence are mentioned as being tonsillar in origin, is today an established fact. Some men claim that bacteria do not go through the capsule of the tonsil but this happens in peritonsillar abscess and in primary tuberculosis of the lymph glands and there is every reason to believe that infection can travel easily from the tonsils. Patterson claims that the supratonsillar fossa is a point from which micro-organisms invade the tonsils and the surrounding tissues, and he points out how frequently implication of that space precedes the inflammatory trouble in the gland itself. Suchannek says that rheumatic infection begins, in a large majority of cases in Waldeyer's Ring, especially in the tonsil. In research work in many cases where staphylococci and streptococci appear in mass and joint affection and arthritis appear the same micro organisms were found in the joint as in the tonsil. In cases of juvenile rheumatism workers have proved that destruction of pharyngeal follicles was followed by a definite lowering of the rate of sedimentation and improvement in the condition. In biopsies of these follicles there was seen a marked hyperplasia of the gland substance with a preponderance of fibro-blasts.

Glands making up the circle of Waldeyer manufacture lymphocytes. Some of these go into the blood stream and some locally like phagocytes wage actual warfare in the throat on the micro-organisms causing colds, influenza and the exanthemata.

When these glands have lost their function, due to repeated infections, then it is that they become potential foci of infection to the patient. Among the many local and systemic complications and sequelae of the involvement of Waldeyer's Ring may be mentioned bronchitis, tracheitis, pleurisy, lung abscess, endocarditis, pericarditis, pyelitis, albuminuria, etc. As to the lingual tonsils, from these we get cases of chronic pharyngitis, voice fatigue, hoarseness and laryngitis and many other local throat symptoms. From this we must conclude that in the past we have treated altogether too lightly our cases of tonsillitis, peritonsillitis and all throat infections whether they have appeared to us mild or serious.

TREATMENT: Under surgical treatment a complete adenoidectomy should be performed, not only the central masses but the masses

over the eustachian tubes should be thoroughly cleaned out. After the adenotome is used the finger should be inserted and all left over masses thoroughly mashed out.

In doing a tonsillectomy the tonsil should be completely enucleated. In leaving a piece and especially after the electro coagulation method the portion remaining is often the most dangerous. Even a perfect tonsillectomy is often followed by a recurrence of tonsillar tissue which may be as serious a focus of infection as was the original tonsil. The lymphoid masses, commonly spoken of as recurrent tonsils, but which are infratonsillar lymphoid tissue that has worked its way upward into the empty tonsillar fossae, are regarded by French as quite as potent a factor of systemic infection as infected faucial tonsils, the same micro-organisms being recovered from both.

The lingual tonsil if too large may be removed surgically. Under the medical treatment the nasopharynx should be cauterized periodically with 1 per cent silver nitrate, antiseptic nose drops may be prescribed, also periodical use of the iodides seems to help considerably. The lymphoid tissue on the back wall of the pharynx and the lingual tonsils should be cauterized with 5 per cent silver nitrate, an astringent gargle may be prescribed and is very beneficial.

Contributing causes and sources of pus and bacterial drainage into the pharynx should be diligently cleaned up. By this is meant infected and suppurating sinuses, and teeth and gum infection e. g. apical abscesses, gingivitis, pyorrhea and Vincents.

Systemically, the internist and family doctor should cooperate in eliminating toxins, getting the vital organs back to normal function and raising the resistance with correct diet, rest, exercise and proper living regime.

The treatment surgically and medically narrows down to the idea of complete removal of pockets containing bacteria which lie dormant and which feed infection into the system, the periodic inspection and stimulation of the complete pharynx, and strict scientific attention to the patient's general and systemic well being.

DISCUSSION

C. K. Beck: Waldeyer's Ring is an old term. During my school days it was almost a byword with the profession. Now it is rarely heard or seen. In reviewing the literature of the past eight years I have found it used only twice in the title of a paper. It may be that some of our younger members did not even know what the term means until they heard Dr. Baker's paper.

So little is known as to the function of these structures that we are almost justified in pronouncing them vestigial and functionless. Almost but not quite. For some reason tonsils and adenoids sometimes recur after careful and complete removal. I am never in any hurry to remove them a second time when I know a complete removal was done. Nature knows more than I. There may be some function necessary for them to perform in the particular individual.

Some members of the profession condemn all tonsils and adenoids. I have always felt that is going too far. In my opinion there should be some very definite reason for the removal of tonsils. The foremost of these reasons is the demonstration of definite disease of the tonsils themselves. Probably all of us have our pet signs. History of attacks of tonsillitis especially repeated attacks, malaise, feeling of a foreign body in the throat, dryness of the throat are some of the subjective symptoms. Probably the most dependable objective symptom in chronic infection of the tonsils is a hyperaemic zone of the anterior pillar. That sign is probably pathognomonic of chronic tonsillitis. I am of the opinion that large tonsils are not always diseased. They should not be removed unless definitely obstructive if there is no other reason for condemning them. If there is cervical adenitis also the suspicion grows that the trouble is in the tonsils, but I do not consider the two together with no other symptom evidence sufficient to advise removal. If however, I find also a hyperaemic anterior pillar or plugs of cheesy debris or pus in the follicles, I feel that I have been remiss in my professional duty if I do not advise the removal of such tonsils. It of course goes without saying that definitely obstructive tonsils and adenoids should be removed even if not considered otherwise to be diseased and regardless of the age of the child.

In the adult more tonsils are removed because of rheumatism or rheumatoid conditions than for any other one thing. It seems to be the consensus of opinion based on experience that removal to prevent rheumatism is effective, but removal as a therapeutic measure is disappointing. No doubt all of us have met with such disappointments. But also we have seen some very brilliant results.

It has been found that nearly twice as many children who still have tonsils develop rheumatism as those who have had their tonsils removed. Recurrent attacks of rheumatism occurred 10 per cent less often in children who had tonsilectomy after the first attack than in those whose tonsils were not removed.

It seems that scarlet fever presents fewer complications and sequellae in the tonsilectom-

ized than in the non-tonsilectomized children.

Schick and Topper made the Schick test on every child who came in for tonsilectomy. A fairly large number showed a positive reaction. Six months after 100 of these positives were retested, 18 remained positive and 82 had become negative. The operation is very effective for diphtheria carriers.

It has been stated that the presence or absence of tonsils does not seem to influence the incidence of poliomyelitis.

The belief has been expressed and it is my opinion that infected tonsils act as definite foci and exciting causes in many cases of toxic goiter.

We are not very happy to be reminded of our mistakes or failures, but the future cannot be best served unless these too are considered. So I must mention some unpleasant facts. In examining a group of 3,358 tonsilectomized school children, Brooks found poor results in 5.2 per cent. The poor results consisted in pieces of tonsils left, injury to the soft palate from scarring of the pillars, and snaring of the uvula. It is not so bad to leave a piece of tonsil. That is not much damage. It can still be removed. But to damage the pillars or soft palate is serious and cannot be repaired. Many of us have seen some terrible results. These throats are much worse than before operation. Many of us have gotten to feel that tonsillectomy is a little unimportant operation that anybody can do. I feel that I must take issue with that stand and say positively that it is wrong. It is a very delicate operation and demands careful training and consummate skill to do it perfectly. Surely no doctor here would want to do it otherwise. I must state as my opinion that we will continue to have these permanently crippled throats as long as any but throat specialists remove tonsils. What would the surgeons think of me if I were to remove an appendix? And yet I have removed more appendices than some of you surgeons. What would the general practitioners think of me if I treated a case of typhoid fever? And yet I have treated more cases of typhoid fever than many of you. Are you fair to the specialist? Are you fair to the patient? Have you taken special training for this important delicate operation? Or does your training consist merely in what you got as an interne in a general hospital? None of us are any too well trained but surely special training prepares one better for special work than general training.

Dr. Baker mentioned electrocoagulation of the tonsils. So far as I have been able to find, except in the ranks of those practicing electrocoagulation or dessication, in this country at least, the profession is unanimous in declaring that complete removal should be done. Most of

the dessicationists are frank enough to admit that they leave portions of tonsils but that what is left is sterilized and will do no further harm. I have seen many of these patients. Not once have I seen a harmless stump. Maybe only the failures have come to me. There are some of the dessicationists who claim to dessicate all the tonsil and nothing else. I do not see how it is possible with any electric current in use for this work to limit its action by a membrane so thin as the so-called tonsillar capsule. The sole condition of a perfect operation as I understand it is complete removal of the tonsil in its capsule without damage to even a single fiber of the muscles surrounding the tonsil. Let us remember that muscle tissue is not regenerated, but replaced by scar tissue where damage has been done. The muscles are important and should not be crippled. Damage to them usually results in their being incorporated in extensive scarring of the fossa and their action becomes embarrassed to say the least. No wonder singers experience a change in voice and find that the throat tires easily. It is hard enough to avoid damage to muscle fibers by careful dissection. It seems to me absolutely impossible with an electric current if all the tonsillar tissue is removed.

J. D. Heitger: Sir Josiah Stamp, of London, England, who visited this country last year, said the following in an address as President of the British Association for the Advancement of Science, in 1936: "In some ways we are so obsessed with the delight and discovery of new things that we have no proportionate regard for the problem of arrangement and absorption of things already discovered."

Just as the attorney must frequently refer to the old English Common Law for decisions, so Dr. Baker has done well to carry us back to original sources regarding nasopharyngeal adenoid tissue. These pilgrimages help us to keep our feet on the ground and enable us to think more logically. Waldeyer was not only a great anatomist but also a versatile pathologist. His investigations and publications on adenoid tissue of the oro and nasopharynx still remains a classic and verify the truth of the dictum that all true progress in medicine and surgery depends upon pathology. Very little has been added in the course of many decades to the careful and accurate observations which he originally made. Many problems in the pathology of adenoid tissue still defy solution. There is much we do not know about adenoid tissue. Certain types of infection and irritation produce unusual reactions such as is seen in Peyer's patches in typhoid fever, the formation of solitary follicles in infected nasal sinus mucosa, and the conjunctival reactions in trachoma and inclusion blennorrhoea and folliculosis. One never loses

an uneasy feeling of incompetence in approaching adenoid tissue involvement. There is probably no condition in the realm of medicine more frequently overlooked than retropharyngeal abscess in infants. This could be avoided if more of us were more retropharyngeal minded and if we availed ourselves of the simple procedure of palpation of the oro and nasopharynx with a trained, gloved finger. The finger is easily trained, and I fear it is a procedure that we commonly fail to practice. If all of us did this retropharyngeal abscess would never progress to the septic, dangerous stage with its high mortality, and we would avoid the shock which frequently comes when the diagnosis, unsuspected antemortem, is made postmortem. When we think of tonsils and adenoids we should also think of the complete Waldeyer ring, and Dr. Baker has done us a favor in calling our attention again to this conception of such a complicated subject.

M. C. Baker (in closing): As I understand it, Waldeyer's ring is shaped somewhat like a horseshoe, with the adenoids making up a large mass in the vault of the pharynx, with the faucial below, and the lingual across the base of the tongue almost meeting in the middle. There are discreet glands in the pharynx, once in a while in the back of the throat, almost the size of a small lima bean. All that goes to make up Waldeyer's ring.

I am always adverse to removal of any organ unless there is definite indication for surgery. But I do believe after a careful diagnosis, if we find this lymphoid tissue in the throat has gotten to a point where it pours more infection into the system than it does good to protect, then it should be removed. This requires careful diagnosis. Then we must do a careful operation. This patient should be inspected from time to time to see that all the lymphoid tissue has been taken care of to stop infection. Maybe medical treatment will be required afterwards. We should do our best to blot out all infection.

Improved Method of Lip Fixation.—Ebert and Boyden treated a relatively large number of cases of congenital deformities of the lip by the following technic: Fixation is accomplished by impaling the lip on an ordinary wooden tongue depressor with heavy common bankers' pins. Closure lines having been marked out, the incision is made along these lines. The authors prefer to employ a new sterile razor blade held in a curved hemostat. Approximation of the segments of the lip is rendered more facile and exact by manipulation of the free ends of the tongue depressors. The edges are brought into place and held there by an assistant while the operator places the sutures.

NOW AND THEN IN OPHTHALMOLOGY*

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Recent observation of a case of gonorrheal ophthalmia in the new born, the first in three years in my private practice, and a case of phlyctenular kerato-conjunctivitis, the first in six years, has thoroughly impressed me with the marked change which has occurred in the nature of our clinical material since I entered the practice of ophthalmology at the turn of the century. At that time the make up of an eye clinic was characterized by the presence of a large group of children suffering with phlyctenular disease who, on account of marked photophobia, moped about the clinic awaiting their turn for treatment; by another group suffering with interstitial keratitis consisting of children who, on account of photophobia and impaired vision, had to be led into the clinic; by yet another group presenting eyes in the various stages of trachoma and its sequellae, many of them almost blind; and by quite a large group of babies, victims of gonorrheal infection, presenting eyes at different stages of blenorrea.

In marked contrast to this picture we find relatively few cases of corneal or conjunctival disease entering into the make-up of the eye clinics of today in which the clinical material is composed largely of cases which on account of impaired vision, headache or for divers other reasons are being refracted; of those requiring fundus examinations or visual field study as part of a general diagnostic investigation; of many undergoing treatment of their ocular muscles and of a variety of less frequent affections of the eyes.

This manifest change can undoubtedly be attributed to improved methods of diagnosis, to introduction of new and more efficient therapeutic and surgical means of treatment and to prophylaxis based upon the scientific study of diet and hygienic conditions.

Of the ocular diseases marked by a very noticeable decline in frequency phlyctenular ophthalmia no doubt represents the one in which the change has been most manifest. This inflammatory disease of the eyes is characterized by the formation of one or more greyish blister like elevations, occurring chiefly on the bulbar conjunctiva with a predilection for the area in close proximity to the corneal limbus, but which may also involve the cornea and quite infrequently the palpebral conjunctiva. These bodies, which

are brought about by circumscribed accumulations of lymphoid cells and colorless blood corpuscles under the conjunctival and corneal epithelium, are often associated with a general lymphatic enlargement in the throat and neck which accounts for the synonymous use of the term scrophulous ophthalmia with phlyctenular disease. Owing to the resemblance of the bleb like phlyctenules to eczematous eruptions of the skin the disease is known by some as eczema of the conjunctiva. Children afflicted with phlyctenular ophthalmia present a typical picture with their heads ducked or buried in the laps of their mothers or attendants, their hands held up to the spasmodically closed lids and the cheeks wet with tears. Whether this erstwhile prevalent eye affection of early childhood is of tubercular origin or whether it may be attributed to a disturbed metabolism based on errors in diet and consequent imperfect alimentary function has been the subject of much discussion and is still a mooted question. However there is little doubt but that the disease is definitely declining in frequency and in severity of the attacks and that it is now one of the infrequent diseases offering for treatment at the hands of the oculist. It has long been my impression that the relative infrequency of this disease, formerly so prevalent in the children of lymphatic tendency, can be attributed to the present day care given the throat and nose and more especially to the frequent surgical removal of the lymphoid structure from the throat and naso-pharynx.

Another conjunctival disease decreasing in frequency is follicular ophthalmia, an affection characterized by the development of small pinkish elevations in the palpebral conjunctiva. These elevations, erroneously spoken of as follicles, are found under the epithelium, usually crowded together in rows. They are small irregularly round circumscribed masses of lymphoid tissues, which in a general way resemble microscopically the lymph structures as they prevail in the nose and throat. When the condition occurs without an inflammatory reaction and practically devoid of clinical symptoms it is known as folliculosis and when associated with marked hyperemia and pronounced clinical symptoms such as photophobia, pain, burning, itching, as follicular conjunctivitis. Both conditions occur largely among children brought up under poor hygienic surroundings and in those suffering with malnutrition, though they also occur in children whose eyes are frequently or constantly exposed to irritants. The disease was quite prevalent during the earlier years of my practice when it was quite

*Read before the Jefferson County Medical Society.

noticeable that many of the children seeking treatment for follicular ophthalmia were subjects of large tonsils and adenoids. Thus it is perhaps a fair assumption that the decrease in the frequency of this disease in recent years must also be credited to the care given the naso-pharynx and pharynx by the rhinologist and particularly to the removal of the tonsils in their entirety as it is practiced today.

The clinical differentiation between follicular conjunctivitis and trachoma has always been difficult and at some stages impossible, hence it was that many cases of follicular conjunctivitis were diagnosed as trachoma and conversely, though much less frequently, trachoma was diagnosed as follicular conjunctivitis.

Inasmuch as a specific micro-organism of trachoma has as yet not been definitely isolated and the laboratory diagnosis of the disease has not been made possible and as the significance of the inclusion bodies so frequently described occurring in cells of the eyelids of trachomatous patients has not been satisfactorily explained it is quite remarkable that the disease has been combated as successfully as statistics would indicate. Even though the frequency of trachoma may formerly have been overestimated through over enthusiastic and often improper diagnoses, this serious infectious form of conjunctivitis, the "sore eyes" of the lay people, actually represented a considerable proportion of the clientele of eye clinics in the early years of this century as compared to the relative infrequency of today. Nothing has been so instrumental in combating the disease in this country as the aid given the study and treatment of trachoma by the federal government in the establishment of hospitals in various sections of the country and the appointment of physicians especially trained in the diagnosis and treatment of trachoma. The facilities at the hospitals for the prolonged and careful treatment, so essential to the ultimate welfare of these cases, along with the education of the people of the infected districts in hygienic prophylaxis of the disease have been instrumental in decreasing the disease in frequency and severity and lessening the sequelae which in former years led to blindness or near blindness.

Another disease frequent in other days which does not figure largely in the make up of the present day clinics is gonorrheal ophthalmia, especially that occurring in the infant. The suggestion by Crede in 1869 that

a one per cent solution of nitrate of silver be instilled in every newborn baby's eyes as a prophylactic measure against gonorrheal ophthalmia marks the first step in the reduction of this disease. However, up to the last decade gonorrheal ophthalmia, especially that of the new born, was still quite prevalent. The most striking reduction in its frequency did not occur until legislation enacted in most states made the application of the Crede prophylactic measure compulsory. Subsequent legislation by state and municipal health authorities making the failure to report cases of blenorrhea neonatorum punishable by law also did much to reduce the frequency of this serious affection of the eyes.

Credit must be given the educational work done among the lay people to impress the significance of gonorrhea as a cause of blindness. In this work the National Society for the Prevention of Blindness stands out most prominently and is deserving of our commendation and co-operation. Through their efforts and that of various other agencies and the consequent treatment of such cases at an earlier period on the part of the physician, gonorrheal ophthalmia no longer furnishes the preponderant cause of blindness in the children of our blind schools as it did in other days. It is interesting to note that this manifest and important change has been brought about even though our methods of treatment of gonorrheal ophthalmia vary but little from those employed in former years.

Another conjunctival affection which is not seen as frequently as in former years is exanthematous blepharo-conjunctivitis, an acute inflammation of the conjunctiva and the margins of eyelids occurring in measles and scarlet fever and other eruptive diseases. This affection was quite frequently observed thirty years ago. Even today we hear the story often recited by older people of having had eye troubles practically throughout their lives which they attribute to measles of their childhood. My own experience leads me to the conclusion that only a small proportion of the ocular ailments attributed to measles was really caused by this exanthematous disease. Exanthematous blepharo-conjunctivitis is now one of the infrequent diseases seen by the ophthalmologist. Credit for this change must be given the improved hygienic and therapeutic measures employed by the internist and pediatrician during the acute attack of the eruptive disease.

Advanced methods of diagnosis and treatment have also affected favorably the syphi-

litic affections of the eye, more especially the disease of the cornea, known as interstitial or parenchymatous keratitis, occurring as a rule during the preadolescent time of life. This process, which involves the substantia propria of the cornea, brings about a diffuse opacity of this tunic but is never associated with ulceration of the surface. It is always ushered in with an acute inflammation of the uveal tract, extending over a period of from eight to ten weeks, during which the patient suffers with marked photophobia, pain, watering of the eyes and disturbed vision. During this stage of inflammatory reaction the children present a helpless, pitiable picture as they are lead into the clinic with their heads down and their eyes spasmodically closed and watering. The acute stage is followed by a quiescent period varying from four to six months or longer, during which the opacity of the cornea interferes with vision in the early weeks almost to the extent of near blindness. The disease nearly always affects both eyes, the irritative phenomena beginning in the second eye at about the time the first eye has passed the peak of the stormy symptoms, thus drawing out the acute stage over a considerable period and creating a most trying condition for both mother and child.

Children affected with this disease formerly constituted a considerable proportion of the clientele of eye clinics. Since the early years of the century there has not only been a noticeable decrease in the duration and severity of the acute stage of the disease but the long trying stage of regeneration and restoration of vision has been noticeably shortened and the prognosis as to ultimate function favorably influenced. Undoubtedly the prenatal care now being given the expectant mother has been the most potent factor in lessening the frequency of interstitial keratitis. The earlier and more certain diagnosis of syphilis through laboratory methods and the improved therapeutic measures applied to the syphilitic mother have not only been a boon to the unborn child but they have offered untold advantages to the children in whom the disease did not become manifest until after birth.

In the early years of my practice the constitutional treatment of parenchymatous keratitis consisted almost entirely of mercurial inunctions. Inasmuch as nearly ninety per cent of interstitial cases were believed to be of syphilitic origin the inunctions were administered in every case of this affection even in the absence of other signs of lues. More modern intravenous and intramuscular treatments have undoubtedly lessened the severity and duration of the acute stage of the

disease and hastened the clearing of the cornea after the subsidence of the irritative phenomena.

The vast decline in the number of conjunctival and corneal diseases in recent years would lead to the natural conclusion that the total number of eye cases presenting for treatment must have undergone a material reduction. However, this is an erroneous deduction for a commensurate compensation has taken place through an increase in frequency of other ocular conditions.

Nothing perhaps has been as largely instrumental in bringing cases to the attention of the ophthalmologist in recent years as the marked increase in frequency of hypertension cases and the coincident changes in the blood vessels. In former years ophthalmoscopic examination was not practiced in these cases but was limited to the cases of advanced renal disease or diabetes in which visual disturbance had become manifest. However the importance of an early recognition of arteriosclerosis in the blood vessels of the retina, regardless of the presence of Bright's disease, is now generally recognized by the internist who no longer awaits the development of ocular symptoms to suggest the ophthalmoscopic study of the fundus oculi. We know now that changes in the retina such as constriction of the arteries, the appearance of silver reflexes on the vessels and tortuosity of the veins are sometimes observed before other signs of hypertension have developed, and that blood vessel changes may become evident before oedema, exudations or hemorrhage of the retina have taken place. This observation has no doubt been a factor in the increase in the number of cases which now consult the oculist for eye ground study.

The observation that other constitutional diseases such as lues, tuberculosis, focal infections and nutritional disturbance are often manifested in ocular changes has no doubt also been a factor in increasing the number of patients frequenting eye clinics.

From the number of cases of detachment of the retina now being diagnosed by the ophthalmologist it would appear that this affection is occurring with greater frequency than formerly. However, this is perhaps apparent rather than real and can be accounted for in a new incentive on the part of the oculist for finding detachment cases, created by the advent of surgical treatment which has lifted this apparently hopeless affection to one of a sanguine prognosis. The introduction of improved apparatus and a more finished technique in the study of field defects and a recognition of the significance of tears in the lifted retina must be given credit for the more frequent and earlier diagnosis of small detachments which might otherwise

have attained considerable size before being recognized.

The oculist is now frequently called upon in the correlation of signs and symptoms of lesions of the brain such as tumors, abscesses and hemorrhages, which may also be regarded as one of the factors in the maintenance of the numerical balance of eye clinics. The study of visual fields is not a new science in medicine though up to a few decades ago it was practiced rather infrequently and indifferently. However, since the advent of the neuro surgeon who depends largely upon the study of visual fields in the diagnosis and localization of intracranial lesions, the perimeter has been modified to simplify the technique of visual field measurements and to add to its accuracy. The significance of the findings are better appreciated and the study of visual field changes has reached the degree of importance that its value in diagnosis warrants. The perimeter and campometer no longer stand unused in some corner to be brought out at infrequent intervals, but now represent one of the most useful and most frequent auxiliaries employed in ocular diagnosis. We not only find modified fields occurring in injuries and diseases encroaching on the pathways of the optic nerves but we also encounter concentric or irregular constrictions of the fields, islands of blindness within the fields (scotomata), and variation in the size of the physiological blind spot, all of which furnish valuable aid in the diagnosis of atrophy of the optic nerve, glaucoma and retrobulbar involvement of the nerve and other conditions.

In very recent years ophthalmologists have manifested a growing interest in functional disturbance of the extraocular muscles, with the result that a considerable portion of all groups of eye patients is represented by patients undergoing study and treatment of imbalance of the extrinsic ocular muscles. The branch of ophthalmology dealing with the ocular muscles is not by any means a new one although the study of muscle function was formerly not applied as a routine in all cases of refraction as it is being done today. Many cases suffering with headaches and other symptoms of asthenopia which are not relieved by the wearing of glasses are found to be due to muscle imbalance and by instituting systematic muscle exercises and other forms of orthoptic treatment are now made more comfortable or are entirely relieved.

Cases of manifest squint are not observed as frequently in the private and clinical work of oculists today as they formerly were, as

many crossed eyes have been straightened either by the use of glasses or by surgery. However, on the whole those now visiting the clinics for oculo-motor defects add considerably to the total of patients applying for treatment.

Quite a few other factors which help to maintain the numerical balance of eye clinics could be enumerated. Of these the introduction of the Roentgen ray in the diagnosis and definite localization of foreign bodies within the eye and the use of giant magnet as a means of withdrawing magnetizable intra-ocular foreign bodies have been of most importance. A much larger proportion of eyes with intraocular foreign bodies are now being saved than was possible prior to the discovery of these valuable aids in diagnosis and treatment of this group of accidents.

Cases of simple or non-congestive glaucoma are now also found in the make up of eye clinics with much greater frequency than formerly. Prior to 1905 when Schiotz invented the tonometer, a delicate instrument employed to register accurately the degree of intra-ocular tension, digital palpation was the only means of determining whether an eyeball was hard or soft. The tonometer has in the last few decades become a most valuable and indispensable part of our armamentarium and has served especially well in evaluating the tension in the non-inflammatory type of case in which palpation with the fingers is of little or no service. As these cases are now kept under more careful observation and are examined at more frequent intervals they naturally constitute a relatively larger portion of the constituents of eye clinics than they did thirty years ago.

I would mention just one other factor influencing the patronage of the oculist, in that the lay public is becoming more and more eye conscious. Through the influence of public lectures, the activities of parent teacher associations and the efforts of national and state societies for the prevention of blindness, the public is realizing the importance of the care that should be given the eyes—especially during the growing period of the child. While this kind of educational propaganda has done much to bring people under the observation of the oculist it is not comparable to the influence of the ever increasing advertisements on the part of the many commercial houses, new cults devoted to the fitting of glasses, graduates in medicine careless of their ethical status and other individuals interested in the sale of glasses, now be-

ing brought to the public through the medium of radio programs and newspapers. Many of those following the urge of the advertiser to care for their eyes decide to consult the oculist for such examination and advice.

DISCUSSION

A. A. Shaper: I do want to ask Dr. Pfingst a question. In the Five and Ten Cent Stores they sell glasses. I thought there was a law to prohibit the sale.

Walter Dean: Dr. Pfingst has been most fortunate to have participated in the development of ophthalmology from its pioneer days to its integrated place in modern medicine.

As Dr. Pfingst has told you we have seen trachoma, phlyctenular keratitis and other external eye diseases almost eradicated from our practice. In their place has come the study of vascular disturbances, inflammations and degenerations of the retina with their general medical correlations; the study of perimetric fields with their ocular, sinus and brain implications; the early diagnosis and treatment of glaucoma and cataract; treatment of external muscle imbalance; etc.

Dr. Pfingst has made this transition perfectly clear and understandable. He has had the faculty of lucid scientific explanation ever since his early days as a teacher of physiology and later ophthalmology.

W. B. Troutman: Recently I saw a strange eye manifestation in a post-operative thyroid case; I wonder if Dr. Pfingst has seen many such cases. I fail to find this symptom discussed in thyroid literature.

Pre-operatively this patient had a basal of plus 25-30 and eyes showed no visible changes. About four weeks after operation she complained of double vision which has persisted until the present time, now about four months. The B. M. R. is now about minus 23 per cent and we have the patient on thyroid extract but as yet no change in eye symptoms.

A. O. Pfingst (in closing): In answer to Dr. Dean's question regarding sulfanilamide I would say that I have had no opportunity to use it. However very favorable reports from eye physicians in all sections regarding its use in trachoma would indicate that there is virtue in its application in this disease.

Replying to Dr. Troutman, it occurs to me that the diplopia referred to in his case can be attributed to disturbed muscle action. The proptosis in cases of goitre limits the rotation of the eye in one or the other direction with a coincident inability to fix objects with both eyes at once and thus two objects are seen where there is but one. I have seen cases in which ocular changes and diplopia occurred following the operation for goitre.

Dr. Shaper asked about the sale of spectacles. As far as I know, anyone may sell glasses, in fact I do not believe that there is any legal reason that would prevent the fitting of glasses. Of course the law does not allow anyone not a graduate in medicine to use therapeutic agents in examining eyes or in the treatment of eye conditions.

ENUCLEATION WITH GLASS BALL IMPLANTATION*

EDWARD C. ELLETT, M. D.

Memphis, Tennessee.

May I first express my appreciation of the opportunity to appear before you. It is a pleasure to recall other meetings in your city, and I would like to pay a respectful tribute to the memory of some good friends who are no longer with us, especially Drs. Cheatham, Ray and Dabney.

The subject is that of the implantation of a ball, I prefer a glass ball, in the socket after enucleation. Besides the handicap and disfigurement that necessarily follows removal of an eye, too often the disfigurement with all its disadvantages is increased if the method of simple enucleation is followed, because in most cases in which this is done the artificial eye has a dead, fixed, sunken, stony look, which not only is a disfigurement but advertises the patient's disability. Of the methods devised to lessen the objectionable features the only one worthy of mention is the implantation of some substance in the socket which will give support and some motion to the artificial eye. Of these substances balls of gold and glass are by far the most popular.

Eyes have probably always been removed. The early accounts, in which the operation was performed without anesthesia and by crude methods whose great desideratum was speed, must have left frightful sockets. When anesthesia permitted more deliberate methods, the esthetic question presented itself, and in 1886 Frost and Lang proposed inserting some solid substance in the capsule of Tenon. Frost sutured the muscles over the foreign body, while Lang closed the capsule as well. Better technique and better asepsis have brought us to the point where we should try some method which promises to give the minimum of deformity, and such a method is, in my opinion, the implantation of a gold or glass ball. The glass balls are cheaper, lighter, more easily procurable, and I have found them entirely satisfactory. I hope I have not given the impression that I think I am advo-

*Read before the Jefferson County Medical Society.

eating a new procedure. My purpose is to call attention to the desirability of the operation, and to describe certain modifications of technique, which will, I think, make the vast majority of the operations successful. The failures are the cases in which the glass ball is expelled. My first case was done in 1898 and was a failure, due to poorly selected case, poor technique and poor after treatment. Most of these early cases were failures, for one of these reasons, but I have kept up with two patients who have retained the glass ball with comfort for thirty years, and many who have carried them ten or fifteen years with satisfaction.

Of the other substances, gold, aluminum, bone, cartilage, sponge, paraffin and fat, I may say that those I have used seemed less desirable than glass.

The operation of enucleation of the eye is satisfactorily done, except in children, with local anesthesia, supplemented by morphine and hyosin given hypodermatically. Of the latter 1-4 gr. of morphine and 1-100 hyosin are given in adults one hour before operation, with correspondingly smaller doses according to age and weight.

If the effect is not sufficient, a second dose of half those amounts is given in three quarters of an hour. The usual method of drops of cocaine or pontocain in the eye is followed, with the addition of a few drops of adrenalin. A retrobulbar injection of four to six cc. of 1 per cent novocaine is given with one drop of one to one thousand adrenalin being added to each dram of the novocaine solution. Additional quantities of this solution may be injected at the insertion of each of the four recti muscles, but this is not generally necessary, the drops and the retrobulbar injection sufficing for anesthesia and ischemia.

The conjunctiva is cut by closely circumscripting the limbus undermined, and the respective recti tendons severed. The undermining, which separates all the tissues from the globe back to the equator, is done by putting the closed scissors in and opening them, a very satisfactory method which we have not seen generally used by others. The internus is cut on the side of the elevating hook furthest from the eyeball, the remaining three severed close to the ball. The internus stump is grasped with a small curved hemostat to give a firm hold and control of the globe. The globe may then be proptosed by depressing the speculum or simply rotated externally and the nerve cut from the nasal side. The oblique tendons and accompanying tissues are then dissected away close to the sclera and nerve, and a hot saline pack

inserted with bayonet forceps to the apex of the orbit, and held in position by firm pressure till all bleeding has ceased. An alternate way of controlling the bleeding is by pressure with a simple instrument devised for the purpose by Dr. D. H. Anthony. It effectually controls bleeding, and permits the sutures, about to be described, to be inserted while the pressure instrument is in place. The capsule is then picked up by four mosquito forceps, as illustrated, and it is always surprising to see what a complete, strong, tenacious membrane the shining silvery capsule is. With some convenient instrument a suitable-sized glass ball, usually fourteen or sixteen mm. in diameter, is then placed in the capsule, firmly depressed and held in position by a strabismus hook or other instrument, which serves not only to keep the ball out of the way while closing the capsule, but helps also to prevent bleeding or oozing behind the ball. The capsule is closed with a purse string suture of either 00 chromic catgut or iron-dyed silk No. 1 to No. 3. Catgut is much to be preferred for the buried sutures, as it remains in place sufficiently long and is in every way satisfactory. Silk sutures may work out over a period of many weeks, to the annoyance and embarrassment of all concerned. The conjunctiva is closed with a horizontal running suture of black silk, the ends being left long to facilitate removal, and a firm pressure head bandage is applied. From some of our subsequent results we believe this pressure to be a very important factor in securing retention of the ball. The patient is kept in bed for twenty-four hours, allowed up and about thereafter, and after seventy-two hours the pressure bandage is taken off. The conjunctival suture is removed by cutting it centrally and withdrawing the two ends left long at operation. The patient leaves the hospital at this time with only an ordinary eye dressing, is seen occasionally for cleaning purposes, and as a rule is ready for a prosthesis at the end of two weeks.

In omitting special suture of the muscles, we are influenced by the fact that the muscles do not normally join together over the eyeball, but are attached to the globe a little in advance of the equator. The purse string suture in the capsule brings the muscles sufficiently far forward for them to impart the desired motion to the glass ball, and to unite them over the ball would seem likely to pull the ball so far back in the orbit that much of its value as a support to the prosthesis would be lost.

A few photographs will illustrate what I consider to be the advantage of this method.

They show the full and natural appearances of the prosthesis, but do not show the motion.

It is quite possible to do late implantations; that is, to put glass balls in old sockets, as first advocated, I believe, by the late Webster Fox. I have several satisfactory results in mind in which the patient was able to compare the cosmetic result of an ordinary enucleation with that following the implant. One patient was a lady who became a recluse on account of a poor cosmetic result, and resumed her place in family and social activities after the implant. One man could not hold a job till after the deformity was removed. A business woman had much the same experience.

A method of late implantation having all the earmarks of the author's splendid surgical ability, has been recently presented from the late Dr. John Wheeler, and is no doubt familiar to all of you. He used a special smooth glass body, roughly square, with grooves to receive the four recti muscles. The conjunctiva of the socket is incised horizontally at the center and dissected off the capsule of Tenon and other tissues of the orbit. A vertical incision is then made through Tenon's capsule, deep into the orbital tissue, and into the cavity thus formed, the grooved body is placed. The orbital tissues and capsule are closed in a vertical direction with catgut, the conjunctiva horizontally with silk or catgut.

If the ball is exposed during healing for any reason it is usually expelled and lost, in which case the patient is no worse off than if the implant had not been attempted. In a few instances it has been possible to close the opening and secure union, and thus retain the ball.

The cosmetic result after an evisceration is very much like that obtained by a glass ball implant, but evisceration is not as desirable as enucleation except in panophthalmitis.

Modern science of endocrinology was first induced by Charles Edouard Brown-Sequard, professor of experimental medicine in the College de France, in Paris, in 1889. In his biography he states the following: ****"The day after the first subcutaneous injection, and still more after the two succeeding ones, a radical change took place in me and I have ample reason to say that I regained at least all of the strength which I possessed several years ago."

POSTPARTUM CARE*

S. S. PARKS, M. D.

Lexington.

I appreciate the opportunity of reading this paper because, according to estimates, only about 10 per cent of our women in Kentucky receive postpartum care and of these less than 2 per cent receive that type of care which is due them in accordance with other branches of medicine as practiced here in our state. Mr. and Mrs. Johnny Q. Public are becoming educated in medical ways and means since they are losing, or have lost, their best friend, the family doctor. Antepartum care is much more common than a few years back and such complications as abortion, toxemia, etc., are less frequently encountered while postpartum complications continue to take their toll. Precedence is strong but a change is being made, possibly by the large group of men whose practice is limited to obstetrics or whose major interest is obstetrical. Their existence has been made possible by the refusal of the general practitioner to "make engagements."

I have endeavored to make this paper as interesting as possible to a mixed group of physicians but if there is aught I have to give it is for the practitioner who is required to "also do obstetrics."

In considering postpartum care I cannot overlook prophylactic measures. These are all-important if the patient is to be free of ill effects during the succeeding years. Throughout the forty weeks of gestation there are changes undoubtedly occurring in the bony pelvis as well as in the soft parts. It behooves us to do what we can to control these changes and thereby aid in the convalescence. And it is needless to say that the management of labor and delivery proper is a fairly good guide as to the course of the puerperium.

Since it is my purpose to discuss the active postpartum care, I will endeavor to bring out briefly those points that are, to me, the most important. I will not go into the various methods employed in the treatment of each individual condition but with your permission I will discuss what is in my belief and short experience the most expedient method to follow.

A life has just been ushered into the world. But the physician's responsibilities are only half performed. In the care of the third stage, I have been very interested in a review of the literature to note the variation in

*Read before the Kentucky State Medical Association, at Louisville, October 3-6, 1938.

duration as given by different workers. The majority of them made me feel that I am too slow. An oxytocin is not given until after delivery of the placenta unless there is evidence of hemorrhage. An attendant has the fundus under his hand and with a gentle to and fro movement keeps the uterine muscle stimulated and fairly well contracted. This should be continuous until the fundus rises in the abdomen and the uterus assumes a cylindrical shape, as evidence that separation of the placenta has occurred. Now with the fingers posterior to and the thumb on the fundus a squeezing grip is applied without pressure toward the pelvis; the placenta and membranes are thus expressed. Immediately thereafter an intramuscular injection of pitocin and ergonovine is given. I would like to mention that ergonovine has been found superior to preparations of ergotamine tartrate. The placenta is examined to ascertain if complete; if not, any retained fragments are removed manually at once, as numerous complications, not the least of which is hemorrhage, may result from failure to accomplish this. Other causes of hemorrhage are long labors, operative deliveries, over-distended uteri, anesthesia during third stage, placenta praevia and lacerations along the birth canal. The average blood loss should not exceed 300 c.c. A loss of 500 c.c. or more is considered hemorrhage. The treatment of hemorrhage here is the same as elsewhere—control the bleeding and replace the fluids lost. Should there be any appreciable bleeding 3 minutes after the first injection both the pitocin and ergonovine are repeated; if not checked after another 3 minutes an intravenous injection of ergonovine alone is given. During this time the uterus is continuously, though gently, massaged. Pressure is never exerted that would force the uterus toward or into the pelvis; rather it is pushed upward in the abdominal cavity and deep pressure made over the cervical portion; the mechanics of this maneuver will tend to constrict the uterine vessels.

If the placenta and membranes are intact, the cervix and adjoining structures are to be examined. Should lacerations be present immediate repair is indicated. The ultimate condition of the pelvis depends upon careful repair. These lacerations are sometimes difficult to expose but easy to repair and, I believe, the most neglected by the majority of us. They may follow excessive uterine stimulation by pituitrin before the second stage—I wonder how long this very dangerous practice will continue. Other causes are induction of labor, operative delivery, mutilating

operations, and version; placenta previa is a predisposing cause.

The treatment following hemorrhage consists chiefly in restoring the lost fluids and cardiac stimulation. The replacement of fluids may be accomplished by any of the numerous routes. The intravenous administration of any fluid other than blood should be postponed until the bleeding is under control since the diluted blood may be washed from these bleeding points. The blood used should be matched and Wassermann tested. The fluids used should be isotonic since hypertonic solutions tend to withdraw fluids, from an already exhausted cell, thereby proving dangerous. If too much is withdrawn irreparable damage is done and no treatment will save life. Too rigid asepsis cannot be observed as these patients are very susceptible to infection.

Perineal repairs vary remarkably in different hands. The ultimate condition of the perineum depends very largely upon whether or not an episiotomy has been done. The method of repairing episiotomies and lacerations is essentially the same. Absorbable sutures approximate the deeper structures and vaginal mucous membrane. I prefer silk-worm sutures for the skin because, contrary to the consensus of opinion, I have a smaller percentage of infections with breaking down when using this type of suture. They are tied loosely over a finger, the ends knotted together to prevent discomfort, and Allis clamps are applied for ten minutes to facilitate in the closure. I am purposely omitting repair of third degree lacerations because I doubt if the carelessness responsible would be able to obtain a satisfactory result from repair.

The patient is now taken to her room while a more careful examination of the placenta is made to determine any abnormalities or gross pathology. The nurse is still observing the uterus to insure that a continuous state of contraction exists and continues to do so for one hour after birth. It is a strict rule that no perineal pads are used as these may be a source of contamination and do not add greatly to the comfort of the patient.

The hospital care of an average patient is probably best discussed by quoting the following routine orders, with some elaboration:

1. Codein sulphate, s. c. gr. 1-2,, p. r. n. for pain. This will give relief and is seldom needed after 24 hours.

2. Ergonovine, p. o. every 6 hours for four days. Sometimes, particularly with the multigravida, I find it necessary to precede this

30 minutes with one of the barbiturates. At the end of the fourth day if involution is not normal it is repeated for another four days.

3. Catheterize after 10 hours and p. r. n. thereafter, instilling m. s. p. ounces one, after each catheterization. This should be done each time the patient voids if the bladder is not being emptied. Urinary tract involvement is far too common and I attribute it to over distention of the bladder, both before and after delivery, in many cases. With the large amount of analgesics now in vogue it is necessary to watch the bladder closely for distention—the muscle may be paralyzed with a resulting stagnation and infection.

Incontinence is rare but it may occur with all the annoying complications. If incontinence occurs without complications, a ring pessary may be inserted.

4. Electric bulb to perineum for 20 minutes t. i. d.—an ordinary 50 watt bulb is used with a wire screen over it to prevent contact with skin and bed clothing. I have found nothing that will give as much relief during the 3 or 4 days when the sutures are drawn the tightest.

5. Pump breasts and discard; this is done prior to lactation. By doing this the mother is saved much discomfort, the breasts are emptied, infection is reduced and the baby is assured of a sufficient amount of food. Tender nipples and fissures should be given careful attention.

Lactation is not suppressed except in the death of the child or pulmonary tuberculosis. Suppression is done by binding the breasts firmly and the application of ice-caps. Morphine, gr. 1-4, is given for pain, unless severe when the breasts should be relieved slightly by using the electric pump; this should be avoided if possible as it prolongs lactation. Rarely the obstinate case is encountered which will necessitate camphor (grs. one in oil) three times a day.

The abdominal binder is not used except on rare cases of multigravida with pelvic pathology when it may be beneficial by preventing the heavy uterine body from rolling around in the abdominal cavity—it certainly gives this patient more freedom and comfort.

Primipara are best kept in the hospital a few more days than multipara.

The uncomplicated case, after returning home is not seen again until eight weeks after delivery at which time another complete physical examination is made.

Exercises are not started until the 9th post-partum day as the majority of patients have had perineal repair, which incapacitates the patient and makes it impossible to per-

form the only exercise prescribed, i. e. the knee chest position; it is taken twice daily for three minutes. Each patient is carefully instructed how this is done at which time they are assured that it will be of no value unless the labia are separated manually, thereby allowing air to enter the vagina. This exercise replaces the heavy uterus, relieving any torsion of the larger uterine vessels and permits early involution. A complication that may arise from this procedure is air embolism in the abdomen, although it causes excruciating pain there will be no untoward results. Rest in bed with morphia for the pain is advised.

Early in the puerperium a common complaint is backache. This is probably not due to uterine retro-displacements but to a subinvolution of the uterus and vagina, particularly the cervical portion and adjoining structures. This is best treated prophylactically by wearing a properly fitted abdominal support during the last trimester of pregnancy. It is benefited and often relieved by the knee-chest exercise, not by replacing the uterus but by permitting of more rapid involution.

Unfortunately, a very small percentage of the mothers are able to nurse due to insufficient lactation, etc.—in the majority group there will be some to have menorrhagia during the first menstrual period—this is controlled by intramuscular injection of anterior pituitary extract. But apparently no benefits are derived from ergot preparations, unless there is considerable subinvolution; in this case the benefits derived are delayed until the next menses.

At the time of the eighth week postpartum examination the weight is checked and if it does not approximate within 5 pounds that before pregnancy occurred, an attempt is made to determine the cause and alleviate the condition. Blood-pressure and pulse are taken. A complete blood count is made with particular attention to the erythrocyte and hemoglobin determinations. Careful attention is given to the condition of the urinary tract since it is here that we most commonly find pathology. Upon making a vaginal examination numerous complications may be discovered which are annoying and painful although not serious. Granulation tissue at the site of the repair of the vaginal mucous membrane is uncommon, but painful if present. Vaginitis and cervicitis are frequently found. In treating these conditions it is well to remember that the cervical secretion is alkaline and the vaginal secretion acid. Careful attention is given to relieve these. Regular visits should be made until the patient has returned to normal.

The problem of future pregnancies should

be discussed and all information available given so that the interval between the birth of her children is neither too short nor too long; both extremes have their disadvantages. The optimum time between pregnancies is approximately 18 to 24 months in the average cases. With elderly primipara and those who have lost their baby this time may be decreased according to the general physical condition. Every woman during the childbearing period should have regular medical examinations.

SUMMARY

Postpartum care is prophylactic as well as active. Of equal importance are conservation of blood, prevention of infection, and repair of injuries. The prevention of infection has not been discussed since this is done primarily before the puerperium begins. The care late in the puerperium is probably overstressed but because it is more often neglected.

REFERENCES

- (1) Adair, Fred L.: *Am. J. Surg.* 35: 267, 1937.
- (2) Fortin, F. Frederick: *Am. J. Obst. & Gynec.* 35: 761, 1938.
- (3) Hemmings, C. T.: *Ohio State Med. & Surg.* 32: 620, 1936.
- (4) Kretzschmar, Norman R. and Huber, Carl F.: *Am. J. Obst. & Gynec.* 35: 621, 1938.
- (5) Kuile, Roger C., Ter.: *Am. J. Obst. & Gynec.* 35: 999, 1938.
- (6) Peckham, C. H.: *Bull. Johns Hopkins Hosp.* 54: 186, 1934.
- (7) Pierce, J. M.: *J. Med.* 15: 302, 1934.
- (8) Randall, L. M. and Murray, S. E.: *J. A. M. A.* 101: 2023, 1933.
- (9) Rucker, M. P.: *South. Med. & Surg.* 99: 1-6, 1937.
- (10) Traev, S. E.: *Am. J. Obst. & Gynec.* 31: 333, 1936.
- (11) White, Milo R.: *Am. J. Obst. & Gynec.* 36: 90, 1938.
- (12) Wilson, J. St. Geo.: *Prenat. & Post N. Man.* Baltimore, Wm. Wood & Co., 1937.

DISCUSSION

W. T. McConnell, Louisville: Dr. Parks has I think, wisely if not technically included in his discussion the third stage of labor, and that gives me an opportunity to say some things about that that I think are very important. In the first place, as soon as the baby is born the uterus does and should normally enter a period of rest, of complete relaxation. How long this period shall last depends upon a number of factors: the length of labor, the amount of exhaustion of the patient, the amount of anesthesia, and other things, and a great many very serious mistakes are made at this particular time. We must remember in the physiology of the third stage of labor that there is no bleeding from the uterine site unless there is separation of the placenta, and there is no physiological reason for hastening the separation of the placenta as long as it is completely attached. Many postpartum hemorrhages are induced by hurry on the part of the doctor to get this placenta separated and out. After the placenta is partially separated it is a different story, there will be bleeding then, and steps should

be taken if there is delay, for extrusion of the placenta.

It is a moot question as to whether any oxytocic should be given before the complete separation of the placenta. Personally I prefer to wait for my oxytocic administration until after the placenta is out. I notice Dr. Parks takes the same position.

There are several ways of telling when the placenta is separated and should be expelled. One is by the "McConnell" method, which is attaching a hemostat to the cord at the vulvar margin and watching occasionally to see how far the cord has progressed outward. When it has progressed outward sufficiently you know, other things being equal, that the placenta has separated. Another is by watching for a lump just over the symphysis.

As to the method of stasis, of controlling bleeding, nature does that in two ways, by contraction of the figure-of-eight muscles, cutting off the large vessels, and by the formation of clots and thrombi in the ends of these vessels.

Another very serious mistake that is made frequently is that after the placenta is out the attendant massages the uterus to promote contraction. That is a very wrong thing to do because you will dislodge these clots and thrombi that are forming there to control the hemorrhage and thereby prolong bleeding. It is a good rule to lay down that there should be no massage of the uterus after the placenta is out. You can hold it if you want to, or you can watch it—you should watch it, of course, or you can "tickle" it a little if you want to, but don't massage the uterus after the placenta is out.

In regard to the bladder, the bladder should be kept emptied. I just wondered, as I heard Dr. Parks' paper, what the vast majority of doctors do in regard to distended bladders when the delivery is conducted in the home, and I would like to ask Dr. Parks to tell those of us who do home deliveries (I don't but a great many of us do) what to do about this proposition. Should a doctor go back to the home two or three times a day and catheterize these patients? Catheterization is a very serious operation; it should be conducted very carefully, and it is a big problem when the patient is in the home.

I think personally the postpartum examination is one of the most important things the doctor discussed. It has been astounding to me how few of the patients I see who have been delivered in years gone by have had this complete check-up. Sometimes if they come in the doctor will examine them and tell them they are all right and go ahead. I ask them, "Did he look at your cervix with a speculum?" and invariably the answer is no. I think no obstetrician has fulfilled his obligation to his patient

until he has seen, not only felt but seen, the cervix after she has had her baby. You can see things that your fingers won't tell you. Some people of course have very nice tactile sense in their fingers, but you can see things in that cervix that you can't tell from the digital examination alone.

I was very much interested in the pelvic examination discussion by Dr. Davis. I think the most important pelvic examination a woman probably ever gets is a postpartum examination. You can find things there that should be treated. Let me say that no woman should be discharged as an obstetrical patient until the organs of gestation are completely back to normal. In fact, Dr. Parks started his discussion right after the second stage of labor and included in the postpartum care the third stage of labor. I would say that no doctor has a right to discharge an obstetrical patient as long as that patient lives; that not only should the postpartum care begin after the second stage but it should continue throughout the life of that patient with periodic and thorough examinations and with a check-up to be sure that everything is right.

Edward Speidel, Louisville: I should like to discuss the postpartum care from the standpoint of the woman. I think the greatest anxiety of the pregnant woman always is as to whether after the birth of her child she will regain her normal health and her normal physical contour, and I feel that attention to those two points is the most valuable thing for the pregnant female. That means that she not only must have a perfect delivery, but she must have perfect attention or instruction for her conduct at least six weeks after the birth of the baby, a period that is normally necessary for the involution of the organs of generation and the entire body of the female.

I agree with Dr. McConnell on the importance of the conduct of the third stage of labor. After having tried all short cuts, administration of pituitrin immediately afterwards, and so forth, I have invariably found it valuable to attach forceps to the umbilical cord as soon as the child has cried lustily just at the outlet of the vagina, and by watching the forceps you will find that you can tell when the placenta has separated. When that placenta has normally separated, by a proper Crede maneuver the placenta will in most instances be expelled intact and examination of the placenta will show it so. If a piece of membrane is left in the uterus, nature will very readily take care of that. The placenta should be carefully examined. It is a very hazardous thing to introduce the hand into the uterus to remove portions of placenta that have not escaped in this manner, as the supposition may well be that any piece that has torn off is very closely adherent

to the uterus, consequently if that maneuver has to be resorted to it must be done under extreme precautions.

I think the modern rules in hospitals are interfering with our proper care of patients. I venture to say the thing holds good even more so in the home. All of our hospitals now are making ten-day rates for our patients, and as a consequence it is very difficult for us to keep our patients in the hospital more than ten days. Naturally, at that time they are hardly able to begin getting out of bed, according to the general custom, and in many instances the umbilical cord of the baby has not even dropped off.

There are certain things that interfere with proper involution. It should be a period of mental and physical rest, and of course we have conditions again that interfere with that in the home to a great extent; in the hospital they have been reduced considerably. I mean the presence of visitors and the excessive visiting of interested friends. In our hospital we have succeeded in limiting that by shortening the hours during which the patient is allowed to have visitors.

The abdominal binder certainly must be a support to the woman immediately after the removal of a tumor and the fluids and placenta that go with it weighing at least nine pounds. In addition it serves as a means of attachment for the lochial pads during the time that the discharge takes place.

Another important thing in returning the woman to normal condition is the beginning of exercises. It is customary in our hospital beginning on the sixth day and on the seventh day as a general thing to add the knee-chest position to those exercises, and the patient is instructed to continue those exercises after she goes home for at least an additional week.

I make it a point when my patients are dismissed from the hospital, especially if they are dismissed on the tenth day, to outline to them their conduct for the next four weeks, telling them what to eat in order not to have overdistention of the abdomen, the amount of physical exercise they should take, and the manner in which they should bathe in the third week and in the fourth week. I tell them that they can take a standing bath in the third week and a sitdown bath after that time. I tell them that they have an indication as to whether they are going along all right, and that is the character of the vaginal discharge; if the lochial discharge is red it means that the involution has not gone along properly and consequently they must get about with less haste. In that way, as a general thing, you will find that a patient will return to normal in a comparatively short time.

Silas Starr, Louisville: There are always a few details in which people differ as to treatment. One thing that Dr. Parks emphasized and to which I have paid a great deal of attention is the question of using vulvar pads on patients after delivery, particularly if sutures have been used. We have tried at the City Hospital and in one of the private hospitals to see how that would work, and theoretically I quite agree that there would be more chance of contamination and a greater incidence of infection, with pads but patients complained about it when they didn't have proper pads covering the vulva; they used sheets and seemed always to be disturbed, and we found that there was no increase at all in our morbidity rate when we used the vulvar pads.

The question of postpartum examination at the end of six or eight weeks is one that I think is probably overlooked more in the general run of practice than anything else, particularly, as Dr. McConnell brought out, examining the cervix. In between eighty-five and ninety per cent of all the cervixes that I have examined postpartum in women who have borne their first babies, I have found evidence of disease. The diseased cervix should always be treated at this time.

I don't think the method of treatment has been mentioned other than to say that it should be done, but I have seen patients with marked cervicitis that have been treated over a period of six or eight months that have come to my office and said they have had applications of iodine or mercurochrome, which I think do about as much good as taking an ordinary douche. The use of the electric cautery in these cases will give excellent results in the vast majority of cases.

Occasionally people have questioned the use of the cautery because they say that cervical stenosis will develop afterwards and make the subsequent deliveries more difficult and prevent the cervix from dilating as it should. If the cautery is used properly and used as an office procedure without using an anesthetic, because it can easily be used that way without causing extreme discomfort or sometimes without causing any discomfort, scar tissue will not develop and subsequent stenosis will not occur. Certainly from the standpoint of future health to the patient, both from local infection and general discomfort; and later the standpoint of development of malignancy, we feel that there isn't anything more important than taking care of this.

One other thing that I consider of very great importance is the question of anemia. However, we begin the treatment of our anemia as a prophylaxis in the prenatal period, and unless the patient has an excellent blood count with over an 80 or 85 per cent hemoglobin during

the prenatal period (and very few of them will show that good blood count) iron should be given in large quantities. When iron is used in this way we will find that our postpartum patients will have anemia comparatively rarely unless they should have developed a hemorrhage at the time of delivery, and convalescence after delivery will be reduced considerably.

A. T. McCormack, Louisville: I think one of the most important indications for postpartum examination and treatment at the present day is the postpartum examination of the obstetrician; that is essential before we do anything else. I would like to examine our obstetricians with a view toward determining why more women are not nursing their own babies. I am sure every general practitioner in the country has already learned a long time ago that most women ought to nurse their own babies, and they do. I can't understand what happened to degenerate our women in towns to remove them from the milkbearing species that take care of their own kind, and I believe it is a distinct reflection on the popular concept of the responsibility of the obstetrician and the pediatrician that more mothers are not nursing their own babies.

Bob C. Overby, Paducah: In the last two years I have written two papers on this subject for the McCracken County Society. I'm constrained to believe a great deal of hypocrisy and inconsistency is embraced in many technical papers read before medical societies as to what we actually do in practice.

With proper prenatal care postpartum care should be normal and without incident, and after treatment is reduced to a minimum and little should be necessary save rest, quietude and food. However, any pathological conditions arising following an obstetrical procedure must be met by modern therapy and surgery.

A very important thing has been mentioned and I feel should be stressed, the care of the blood. The anemias are so frequently present before and after delivery. The correction of which is generally not a difficult matter. A Tallquist scale is a very practical and simple aid in determining low hemoglobin scale present in most blood dyscrasias, especially for physicians in the country where they do not have access to a more elaborate and accurate laboratory facilities. We have so many iron preparations, combinations, etc, there is no excuse for not prescribing them generously. By their use we restore blood loss, lost strength and very greatly assist the mother with better milk quality and quantity.

Too much meddling, unnecessary examinations, hurry during confinement and delivery without doubt is the greatest source in the development of trauma, lacerations and infections in hospital or the home.

John W. Scott, Lexington: I don't know a thing in the world about postpartum care. I want to say one thing, however, about the determination of the degree of anemia. Some body said that the greatest need of the American public was a good five-cent cigar. It seems to me one of the greatest needs of the medical profession is a cheap, easily used method to determine the level of hemoglobin in the blood. To me the Tallquist scale is so misleading that it is almost worse than useless unless it is used in this way: that the color of the drop of blood obtained on the finger is first observed. I really believe that the color of the blood grossly a better determiner of the degree of anemia than is the color on the paper of the Tallquist scale. If one would only stick the patient's finger and look at the blood, he would discover termine the grade of anemia more correctly certainly any severe anemia and would de-than is possible with the Tallquist scale. The Tallquist scale is, I think, useless.

W. B. Atkinson, Campbellsville: I can't understand why I have been asked to discuss this because I am probably the poorest obstetrician in the State of Kentucky, but there are a good many things about postpartum care that are interesting. The first thing is this: Don't do something unless it is necessary. There is no use of giving them a lot of iron unless they are anemic; there is no use of sewing up the lacerated perineum unless you have got lacerations, as two medical students I knew one time sewed up the thing when there wasn't any laceration and then they had to go out and take out the stitches and catheterize the patient. In other words, know what you are doing before you do it.

The most important thing in the postpartum care of women, in my opinion, is observation of the cervix with a bivalve speculum from six to ten weeks after, and if you find any of the lacerations there that are red and inflamed, canterize them either with a red hot iron, silver nitrate, or with the electric cautery, or any other thing, and if you do that you will not have to do as many pelvic examinations as was talked about in the previous paper.

S. S. Parks, (in closing): In regard to catheterization in the home, I have done it only once and it is not a desirable procedure. I feel very sorry for the practitioner in the country for one will certainly have cases of retention occasionally, following long labors, he will have bladder infection with possibly pyelitis following and I know of no way in which it is preventable unless catheterization is done.

As to separation of the placenta being evidenced by vaginal bleeding and dropping of the cord, this does not necessarily occur. It is possible to have hemorrhage posterior to the placenta and membranes of sufficient severity to

endanger the woman's life without external bleeding. I still suggest that one hand be kept over the fundus until the placenta is extracted.

I was very glad that it was suggested to give each patient an outline of duties to perform after parturition. It is annoying to have both of ones patients calling at the same time to ask when they may go downstairs, for a car ride, or take a tub bath, etc. It is better to answer these simple yet important questions when the last post-natal visit is made or when the patient leaves the hospital. This is best done by a small sheet of questions and answers.

In regard to perineal pads being used during postpartum period, there is room for argument on both sides; if not there would not be such contradicting practices in vogue. I am in favor of leaving them off.

In discussing anemia I have reported the results of blood examinations made upon a hundred successive private patients with approximately 500 blood and hemoglobin estimations. I do not want to get into antepartum care but would like to state that only readings of less than 65 per cent hemoglobin and 3,330,000 erythrocytes are regarded as indicative of anemia during pregnancy. It was revealing to me to discover that the average hemoglobin reading over the entire antenatal period was approximately 70 per cent and the readings were checked with three types of hemoglobinometer. Of course there was considerable variation according to the trimester in which the estimations were made. The readings would probably run lower should all strata of society be included.

I greatly appreciate the discussion given this paper.

Carcinoma of the Cervix: Mortality Reduction.—Clarkson and Baker point out that cancer of the cervix accounts for nearly 20 per cent of all deaths from cancer in women. Their observations agree with those of Norris, who thinks that a cross section of all cases of carcinoma of the cervix will show five year survivals of not more than 10 per cent. When one considers the fact that five year survivals of well over 50 per cent have been reported following proper roentgen treatment of moderately advanced cases, it becomes obvious that the number of deaths can be greatly reduced by the effective application of treatment methods. Inadequate knowledge of cancer and geographic inertia afflict both the average physician and the general public. Through close cooperation with local medical societies, rotating cancer clinics could carry cancer control to the public and to the physicians. The establishment of cancer clinics would stimulate the demand for specialization in oncology and there is no field of medicine in which intense specialization is more urgently needed.

NEWS ITEMS

The American Physicians' Art Association composed of members in the United States, Canada, and Hawaii, will hold its second Art Exhibit in the City Art Museum of St. Louis, May 14-20, 1939, during the annual session of the American Medical Association. Art pieces will be accepted for this art show in the following classifications: (1) oils both (a) portrait and (b) landscape; (2) water colors; (3) sculpture; (4) photographic art; (5) etchings; (6) ceramics; (7) pastels; (8) charcoal drawings; (9) bookbinding; (10) wood carving; (11) metal work (jewelry). Practically all pieces sent in will be accepted. There will be over 60 valuable prize awards. For details of membership in this Association and rules of the Exhibit, kindly write to Max Thorek, M. D., Secretary, 850 Irving Park Blvd., Chicago, Ill., or F. H. Redewill, M. D., President, 521-536 Flood Bldg., San Francisco, Calif.

Dr. A. A. Casper, Hampton, member of the Livingston County Medical Society died February 15th of pneumonia following a prostatectomy.

The prompt and efficient work of the Washington County Board of Health with the cooperation of the State Board of Health checked the spread of smallpox in the county. A total of eight cases had been reported.

The Warren County Medical Society met in Bowling Green and elected the following: President, J. H. Blackburn; Vice-President, W. P. Drake; Secretary-Treasurer, W. O. Carson.

Dr. W. R. Summers has been appointed Superintendent of the Central State Hospital at Lakeland. Dr. Summers was formerly Assistant Superintendent and Psychiatrist at the Western State Hospital at Hopkinsville, and came to this state after years of service at St. Louis City Sanitarium.

Dr. Robert E. Zimmerman, graduate of the University of Louisville School of Medicine in 1938, was found frozen to death near McIntosh, S. D. Dr. Zimmerman, with his wife and twin sons, left Butte, Mont., where he had been serving his internship, January 25 to visit his parents. He was said to have been returning to Butte alone in an automobile.

Dr. J. E. Dunn, Smithland, Kentucky, will leave April First for New Orleans, Louisiana, for an extended course in Pediatrics. He has been the full-time county health officer in Livingston County for two years, and has rendered

health service to the people of this county comparable to the best in the state. He will be succeeded by Dr. Clifton Fishback of Louisville who has just completed his public health training at the public health center in Fayette County under Dr. Charles Cawood.

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons announces that the annual Foundation Prize for this year will be \$100.00. Those eligible include only (1) interns, residents, or graduate students in Obstetrics, Gynecology and Abdominal Surgery, and (2) physicians (M. D. degree) who are actually practicing or teaching Obstetrics, Gynecology or Abdominal Surgery.

Competing manuscripts must (1) be presented in triplicate under a nom-de-plume to the Secretary of the Association before June 1st, (2) be limited to 5,000 words and such illustrations as are necessary for a clear exposition of the thesis, and (3) by typewritten (double-spaced) on one side of the sheet, with ample margins.

The successful thesis must be presented at the next annual (September) meeting of the Association, without expense to the Association and in conformity with its regulations.

For further details, address Dr. James R. Bloss, Secretary, 418-11th Street, Huntington, W. Va.

The Kentucky Division of the Women's Field Army of the American Society for Control of Cancer gave a silver tea at the Brown Office Building Auditorium, Louisville, March 7th, which was quite a success. All the posters were made by the Junior and Senior High School students for which a prize of \$100 was awarded. Music was furnished by distinguished visitors attending the Southern Convention of Music.

Dr. Challon G. Forsee, 63, physician, died at 12:30 A. M., Friday, March 3rd, at his home, 2512 Longest, Louisville, following a month's illness. He had practiced in Louisville for 33 years and most of that time was resident physician for the Louisville and Nashville Railroad. He was a graduate of the University of Louisville, School of Medicine.

The Third District Public Health Association held their meeting at the Boxwood Hotel, Glasgow. Dr. G. M. Wells, head of the Warren County Health Department spoke on the Expansion of Public Health Work. The meeting was attended by the health officers and many physicians of the Third District.

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NEXT MEETING: BOWLING GREEN
SEPTEMBER 11-14, 1939

EDITORIALS

HAVE YOU PAID YOUR DUES?

Members of the Association who have not paid their dues for the current year are urged to send in their remittances to reach us not later than April 1st. The postal laws make it mandatory upon us to drop the names of all who are in arrears at that date. It is very important for physicians to keep themselves in good standing, both in their respective local societies and in the State Association. Several instances could be cited where carelessness or negligence in this particular has proved extremely costly in the shape of attorney's fees for defense in suits charging malpractice. From the standpoint of economy alone, membership in good standing is worth many times the outlay entailed; the professional value of contacts so maintained is incalculable.

BOWLING GREEN MEETING

The Program Committee, of which Dr. C. N. Kavanaugh, Lexington, is Chairman, reports progress in arranging the scientific program for the Bowling Green Meeting, September 11-14. The program this year will be divided, as suggested by Dr. John W. Scott, President-Elect, in a recent editorial, into medical and surgical sections. This program, when completed, promises to be one of the most interesting and profitable in the history of the Association.

There will be interesting scientific exhibits, as well as technical exhibits, and all members are urged to begin making plans for vacations to include this meeting.

ANNOUNCEMENT OF VAN METER PRIZE AWARD

The American Association for the Study of Goiter again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association which will be held in Cincinnati, Ohio on May 22nd, 23rd and 24th, 1939, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten double spaced copy sent to the Corresponding Secretary, Dr. W. Blair Mosser, 133 Bidle Street, Kane, Pennsylvania.

DR. MARSHALL McDOWELL



The State Association suffered a severe loss in the death of Dr. Marshall McDowell who had been treasurer since 1929. He was the son of Dr. Hervey McDowell and practiced with him until the latter's death in 1902. He was also a great nephew of Dr. Ephraim McDowell.

He was born in Cynthiana in 1872 and was graduated from Ohio Medical College in 1894 and served his internship at the Good Samaritan Hospital in Cincinnati. Dr. McDowell was a charter member of the Harrison County Medical Society and the records show that he never missed a meeting. He was a member of the staff of the Harrison Memorial Hospital and was one of its strongest supporters. Dr. McDowell was one of the best physicians in Kentucky, a loyal, faithful member of his profession, always willing to give of his time, energy and thought to the interests of the profession and to the people it serves.

Dr. McDowell's memory will be held in reverence in the history of medicine in Kentucky. The Journal especially extends the sympathy of the Association to his wife and daughters who survive him.

DR. ROBERT C. McCHORD

The Journal records with deep sorrow the death of Dr. Robert C. McChord at Lebanon on February 2, 1939. Dr. McChord was the oldest living Ex-President of the Kentucky State Medical Association, having served in 1897. He was born in Springfield, November 1, 1851, a son of Robert C. and Laura (Hynes) McChord. He graduated from Centre College and was a member of the class of 1875 of the Louisville Medical College. Dr. McChord was a member of the Council of the State Medical Association from 1905 to 1935 and was its Chairman from 1916 to 1934. He was Vice-President of the Southern Medical Association in 1907 and was a fellow of the American College of Surgeons. For 55 years, he was surgeon for the Louisville and Nashville Railroad. He is survived by six sons and a daughter, one of the sons being Dr. Charles McChord of Lexington. Dr. McChord founded the Elizabeth Hospital at Lebanon, one of the first in the smaller cities in the State. He was in charge of its surgical work for 35 years. Dr. McChord was a frequent contributor to medical literature, and was a delegate to the American Medical Association for several terms. He was chairman of the committee which wrote the present constitution of the Kentucky State Medical Association which has not been amended since its adoption in 1904.

No man exercised a greater influence in developing the constructive policies of the Kentucky State Medical Association than Dr. McChord.



JEFFERSON COUNTY MEDICAL
SOCIETY

The Jefferson County Medical Society has an active membership of 441. The Society meets in the amphitheatre of the City Hospital on the first and third Mondays of the month at 7:45 P. M.

There are 18 standing committees that are responsible for the various activities of the association.

The Society maintains a Physicians' Exchange which is under the direction of the Professional Service Committee. This has a 24 hour service and 158 members of the Society subscribe for this convenience.

The Jefferson County Medical Society also sponsors a Nurses Registry. Formerly there were three such registries in Louisville. These through the action of the Medical Economics Committee have been welded into one strong registry. This has proved most satisfactory both to the nurses and physicians. This is also under the Professional Service Committee.

The Jefferson County Medical Society also sponsors The Part Pay Plan. A number of physicians have volunteered to accept patients on this basis. The physicians' names are listed though the Physicians' Exchange, —calls coming for this service are relayed to the physician nearest to the residence of the patient. The director of the Department of Social Admitting to the City Hospital in her annual report for 1938 shows a very significant trend as the result "of educating the public regarding social admitting policies." There were considerably fewer patients applying for admission who were financially able to pay all or part cost of medical care. Those who were financially ineligible for admission were referred as follows: to the physician of their own choice, the physicians subscribing to the part pay plan and the compensation cases to their respective Company Physicians. It is conceivable that a similar service applied to the Out Patient Department would reveal many applicants who were financially ineligible.

Another important feature is the Credit Rating Bureau. This was developed and put in operation by the Medical Economics Committee and has been of inestimable value to those physicians who use it. In the file of this bureau are listed the names of people who refuse to meet their professional obligations even though well able to do so. Any active member of the Society may inquire as to whether a prospective patient is listed with them and receive their credit rating immediately. This has saved many phy-

sicians from considerable financial loss and is beginning to make the public realize that a good credit rating for medical services is even more desirable than good commercial credit.

There is a Tuberculosis Reference Committee who pass on the X-Ray films and physical examination of public school teachers who have tuberculous lesions on which there is a question as to whether such lesions are arrested and as to whether it is permissible for the teacher to continue in the public school system.

There is also a Committee that cooperates with the Public Health Nurses Association on matters that may be related to both groups.

Much valuable work has been done by the Medical Economics Committee. They developed the plan for Hospital Insurance, and in conjunction with a Special Committee worked out a procedure whereby the patient had choice of any of the hospitals subscribing to this service.

The Association in conjunction with the Dental Profession has an Editorial Committee that cooperates with the City and County Departments of Health in providing material for a Health Column appearing daily in the Courier-Journal. There are also special committees that advise and cooperate with the City and County Health Offices in health matters and report back to the Society their recommendation for cooperation in specified activities by these departments. This has resulted in harmonious relations between the Medical and Official Public Health Agencies.

The certified Milk Committee sponsors the production of certified milk in the city according to the rules, regulations and standards laid down by the American Certified Milk Association.

In addition to the foregoing there are—The Woman's Auxiliary, Dental Relations and Druggists Relations Committee whose responsibility is to cooperate with these associations on matters which are of mutual interest.

The other standing committees such as Executive, Program, Membership, Library, Public Relations and Judicial Council are responsible for the usual duties associated with such offices.

The Profession and the Society through its various committees are making every effort to meet the medical needs of the community so that none may be denied adequate medical care.

O. O. MILLER, President.

OFFICIAL ANNOUNCEMENT

PEDIATRIC POST GRADUATE
INSTRUCTION

APRIL 26-JUNE 29, 1939

A Postgraduate Course of Instruction in Diseases of Children will be held at the Children's Free Hospital in Louisville beginning Wednesday, April 26, 1939 and continuing each Wednesday for ten weeks from 9 A. M. to 1 P. M.

One hour will be spent each week in a discussion by the Staff of all interested cases in the Hospital. All of the newer methods of treatment by transfusions, lumbar and cisterna puncture, hypodermoclysis, peritoneal injection, syphilis, etc., will be demonstrated on patients. Lectures will be given on many of the puzzling problems in diagnoses and treatment, but such other questions as may be suggested, will also be discussed. The staff will be composed of Drs. Philip F. Barbour, J. W. Bruce, Lee Palmer, W. W. Nicholson, H. S. Andrews, A. A. Shaper, J. H. Pritchett, J. J. Glaboff, Annie Veech and Margaret Limper.

Further inquiries should be sent to Dr. Philip F. Barbour, Heyburn Building, Louisville. A nominal charge of \$5.00 will be made for the entire course. A certificate will be issued if desired. The program will be given as follows:

APRIL 26

- 9-10 Cries of Babies
Philip F. Barbour
- 10-11 Weekly Conference
Staff
- 11-12 Mental Hygiene and Behavior Problems
J. W. Bruce
- 12- 1 Infant Feeding
Lee Palmer

MAY 3

- 9-10 Care of Newborn and Premature
W. W. Nicholson
- 10-11 Weekly Conference
Staff
- 11-12 Juvenile Tuberculosis
H. S. Andrews
- 12- 1 Growth and Development
A. A. Shaper

MAY 10

- 9-10 Deficiency Diseases
J. W. Bruce
- 10-11 Weekly Conference
Staff
- 11-12 Syphilis
J. H. Pritchett

- 12-1 Pleurisy and Pneumonia
J. J. Glaboff

MAY 17

- 9-10 Abdominal Pain in Children
Philip F. Barbour
- 10-11 Weekly Conference
Staff
- 11-12 Interpretation of X-rays in Children
H. S. Andrews
- 12- 1 Anemia, Primary and Secondary
A. A. Shaper

MAY 24

- 9-10 Immunization and Preventive Medicine
W. W. Nicholson
- 10-11 Weekly Conference
Staff
- 11-12 Contagious Diseases
J. H. Pritchett
- 12- 1 Encephalitis
J. J. Glaboff

MAY 31

- 9-10 Transfusion and Parenteral Fluids
Margaret Limper
- 10-11 Weekly Conference
Staff
- 11-12 Asthma and Eczema
Lee Palmer
- 12- 1 Influence of Good Prenatal Care on the Health of the Child
Annie Veech

JUNE 7

- 9-10 Emergencies in Childhood
J. H. Pritchett
- 10-11 Weekly Conference
Staff
- 11-12 Diarrhoea and Dysentery
J. J. Glaboff
- 12- 1 Diagnosis and Treatment of Meningitis
Lee Palmer

JUNE 14

- 9-10 Convulsions
P. F. Barbour
- 10-11 Weekly Conference
Staff
- 11-12 Rheumatic Fever and Heart Disease
W. W. Nicholson
- 12- 1 Poliomyelitis
A. A. Shaper

JUNE 21

- 9-10 Burns
J. W. Bruce
- 10-11 Weekly Conference
Staff
- 11-12 G. C. Vaginitis and Bed Wetting
Margaret Limper
- 12- 1 Laboratory Methods
H. S. Andrews

JUNE 28

- 9-10 Routine Health Examination
J. W. Bruce
- 10-11 Weekly Conference
Staff
- 11-12 Pyelitis and Nephritis
J. H. Pritchett
- 12- 1 Endocrine Disturbances
P. F. Barbour

COUNTY SOCIETY REPORTS

Greenup: The Greenup County Medical Society held a dinner meeting in the dining room of the Presbyterian Church, Greenup, February 10, 1939, at 6:30 P. M. Election of officers followed the dinner, which was given by the Ladies Aid Society. H. T. Morris was chosen President; H. H. Holbrook, Vice-President; R. L. Compton, Secretary and Treasurer; and C. B. Johnson, Censor for a term of three years. C. B. Johnson was appointed Delegate, with H. T. Morris as alternate.

Wives of members, visiting physicians and their wives and the county health nurses were guests of the evening. Dr. Clyde Sparks of Ashland, guest speaker, gave a very interesting talk on some of the problems of the general practitioner. A musical program was rendered by Miss Numia Lee Fouts and Mr. Dalton Fouts, of Russell, and Mrs. Richard Doran and Mrs. R. L. Compton of Greenup. Mrs. Fanny Kinner gave a very fine reading.

With the exceptions of June and July, 1938, we have had regular monthly meetings, each carrying a scientific program, since January 1st, of last year.

R. L. COMPTON, Secretary.

Henry: The Henry County Medical Society met in regular session at the office of the Secretary on March 2, 1939. Present: L. E. Elliott, Lockport; E. W. Wyman, New Castle; H. E. Troup, Eminence; M. Bell, Eminence; W. B. Oldham, New Castle; W. W. Leslie, New Castle; O. P. Chapman, Port Royal; F. D. Hancock, Sulphur; and Owen Carroll, New Castle.

The meeting was called to order by W. W. Leslie, President, and, as Dr. Lukins, Councilor, failed to attend, was turned into a round-table discussion, several doctors reporting cases of interest.

O. P. Chapman reported a case of Raynauds Disease, stating it was running a regular course in regard to fingers and toes. Treatments suggested by different doctors included Van-Cotts vaccine, with sedatives; electricity; vitamins and ovarian substance. The disease being very rare, the discussion, of course, was limited.

Dr. Hancock reported a case of anemia, caused by hemorrhage from the bowel; case was operated; blood pressure low following hem-

orrhage, but became very high after operation, resulting in a cerebral hemorrhage, with paralysis of the left side. The case is improving and will, the doctor thinks, recover.

Dr. Troup reported two cases, one a rectal abscess and the other an abscess above the bladder, draining through the vagina, in which, at no time, did either patient have any pain, making impossible diagnosis until the rupture of abscess.

Dr. Elliott reported a case of pistol shot wounds. The first shot went through the arm, fracturing the middle third of the radius; the second shot entered the mouth, coming out near the mastoid bone; the third shot penetrated the frontal bone and lodged within the skull near the petrous portion of the sphenoid bone. The patient is recovering, although he has a paralysis of the right arm.

Dr. Oldham reported a case of mouth bleeding in two day old baby, which weighed 15 pounds at birth. He was unable to locate the point of hemorrhage. The child, after bleeding several days, recovered.

The committee on programs requested Dr. Troup to write a paper for our next meeting, which will be held at the office of the Secretary on the second Thursday, instead of the first Thursday, in April at 7:00 P. M.

Dr. Troup called the attention of the Society to a new regulation in regard to dispensing narcotics, stating that several drugs not heretofore requiring a narcotic prescription number were added to the list.

OWEN CARROLL, Secretary.

Jefferson: Resolutions in behalf of Doctor Thomas Langford Butler by the Jefferson County Medical Society December 5th, 1938.

Whereas:—Doctor Thomas Langford Butler, late Professor of Surgery, in the Fourth "Group Faculty" of the University of Louisville; and life-long fellow of the Jefferson County Medical Society, was called to his immortal Home, and to his idolized wife, November 18th, 1938; and

Whereas:—Doctor Butler was the son of Doctor John Russell Butler, of the Medical Department of the Army of the C. S. A.; and was the grandson of Doctor Charles Wilkins Short, pioneer Botanist of Kentucky, and Professor in the Medical Colleges of Transylvania and the University of Louisville; and was himself a pioneer in X-ray work and greatly esteemed by his fellow physicians, his patients, and friends and beloved family; therefore—

Be it resolved:—That this Society desires to express its sympathy to the bereaved relatives, to the many patients and friends and to record its own loss among the memorabilia of its archives; therefore—

Be it resolved:—That a copy of these reso-

lutions be sent to the family, and that a copy be published and that a copy be spread upon the minutes of this Society.

Unto the Lord of Earth and Heaven, he

Gave thanks; for this, his Life did show;

His works revealed a heart of gold; and so
Reflected what the Master's will would be.

His skill was fully given to the plea

Of human suffering, here on Earth below

His ideals were what angels now may know;
By word and deed he taught what we should see.

So what his art, three generations, crowned

At last with triumph, peace and things he
loved

He helped where'er a helper's need was
found.

So thus, his works among us do abound,

Yet was the helping hand so deftly gloved,

That noise of help was never made to
sound.

Geo S. Coon

S. C. Frankel

R. Alexander Bate

Jefferson: The January program of the Jefferson County Medical Society was as follows: The business session began promptly at 7:45 P. M. and the guest speaker was Dr. Edward C. Ellett, of Memphis, Tennessee, and he came under the auspices of the Louisville Eye, and Ear Society, and the subject of his essay was "Dacryocystorhinostomy."

W. E. TROUTMAN, Secretary.

Jefferson: The program for March 6 was carried out as follows: As guest speaker of the Louisville Obstetrical and Gynecological Society M. Edward Davis, Chicago Lying-In Hospital Department of Obstetrics and Gynecology, spoke on Present Day Treatment of Hemorrhage Late in Pregnancy. On March 20, the program was as follows: The Pathogenesis of Anemia, Harold Gordon, Department of Pathology University of Louisville Bronchial Asthma, Frank A. Simon.

Discussion by J. W. Bruce, Max Goron.

Treatment of Pneumonia, A. T. Hurst, discussion by A. C. McCarty.

W. B. TROUTMAN, Secretary.

Harrison: On January 25, 1939, Dr. Marshall McDowell was stricken with a cerebral hemorrhage at his home in Cynthiana, only an hour after returning from a sick call twelve miles in the country. He died twenty hours later, on the 26th of January.

Dr. McDowell, a son of Dr. Hervey McDowell, was born in Cynthiana in 1872. He graduated in 1894 from the Ohio Medical College

and served his internship in the Good Samaritan Hospital, Cincinnati, under the tutelage of such men as Drs. W. W. Dawson, P. S. Conner, Thaddeus Ramey, Charles L. Bonifield and James T. Whitaker, who regarded the code of ethics as a sacred doctrine and Marshall never departed from that teaching.

After completing his internship, Dr. McDowell was associated with his father in the practice of medicine until the latter's death in 1902.

It is difficult for those who were his daily associates, as we have been for the past twenty years, to speak in moderation of Dr. McDowell's sterling character and many attainments, his fidelity to his profession, his true and steadfast loyalty to his friends and his unselfish service to humanity. In his death the profession of this county and state has lost one of the most useful members; to those of us who remain there is left the memory of his loyalty and helpfulness in times of need. His example will always be one to be emulated by those who associated with him.

Dr. McDowell was a charter member of the Harrison County Medical Society and was never absent from a meeting unless professional duties prevented his attending. At the time of his death he was treasurer of the Kentucky State Medical Association, a position he had held since 1929.

Dr. McDowell was the last physician of that McDowell family which produced so many illustrious physicians and surgeons. Though modest and retiring, Marshall was a worthy descendent of that great family. He leaves a widow, three daughters and two brothers, to whom the members of the Harrison County Medical Society extend their sincere sympathy.

RESOLVED: That a copy of this tribute of respect be sent to his family and a copy to the Kentucky Medical Journal for publication.

W. B. MOORE,

J. M. REES,

J. P. WILES,

Committee

The number of deaf adults could be reduced by fifty per cent if the ears of school children in the primary grades were periodically examined and, when necessary, treated. This is the opinion expressed by Drs. S. J. Crowe and John W. Baylor, Johns Hopkins University School of Medicine, in the leading article in the forthcoming issue of the Journal of the American Medical Association. The most common type of middle ear deafness in adults begins during childhood. Often it progresses so gradually and insidiously that it may not become evident until it is too late to correct the primary trouble and to restore the hearing.

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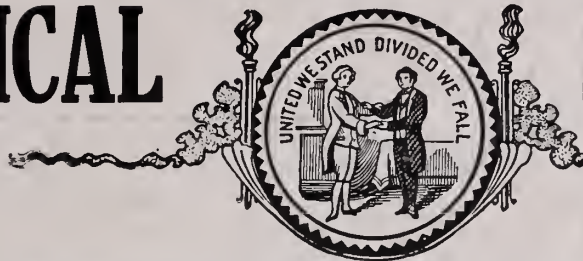
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VOL. 37, No. 5

BOWLING GREEN, KY.

MAY, 1939

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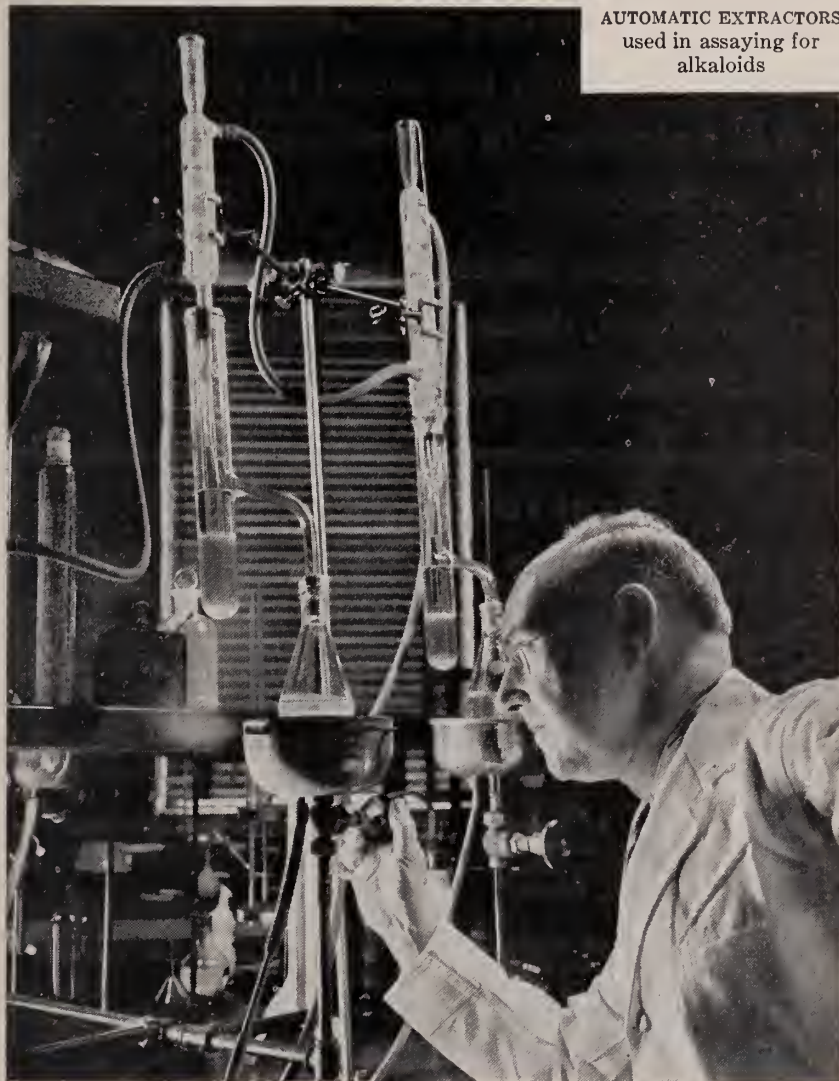


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BIBLIOGRAPHY

GUTTMANN, E.—The Effect of Benzedrine on Depressive States—*J. Ment. Sci.*, 82:618, September, 1936.

MYERSON, A.—Effect of Benzedrine Sulfate on Mood and Fatigue in Normal and in Neurotic Persons—*Arch. Neurol. & Psychiat.*, 36:816, October, 1936.

DAVIDOFF, E.—A Clinical Study of the Effect of Benzedrine Therapy on Self-Absorbed Patients—*Psychiatric Quart.*, 10:652, October, 1936.

WILBUR, D. L.; MACLEAN, A. R. and ALLEN, E. V.—Clinical Observations on the Effect of Benzedrine Sulphate—*Proc. Staff Meet. Mayo Clin.*, 12:97, February 17, 1937.

NATHANSON, M. H.—The Central Action of Beta-aminopropylbenzene (Benzedrine)—*J. A. M. A.*, 108:528, February 13, 1937.

DAVIDOFF, E. AND REIFENSTEIN, E. C., JR.—The Stimulating Action of Benzedrine Sulfate—*J. A. M. A.*, 108:1770, May 22, 1937.

GUTTMANN, E. AND SARGANT, W.—Observations on Benzedrine—*Brit. Med. J.*, 1:1013, May 15, 1937.

WOOLLEY, L. F.—The Clinical Effects of Benzedrine Sulphate in Mental Patients with Retarded Activity—*Psychiatric Quart.*, 12:66, January, 1938.

ANDERSON, E. W.—Further Observations on Benzedrine—*Brit. Med. J.*, 2:60, July 9, 1938.

BRINTON, D.—Nervous Diseases—Benzedrine Sulfate—*The Practitioner*, 139:385, October, 1937.

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY—The Present Status of Benzedrine Sulfate—*J. A. M. A.*, 109:2064, December 18, 1937.

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY (Announcement of Acceptance)—*J. A. M. A.*, 111:27, July 2, 1938.

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*Windwer and Matzner, *Am. Jl. Dig. Dis.* 5:743, 1939.

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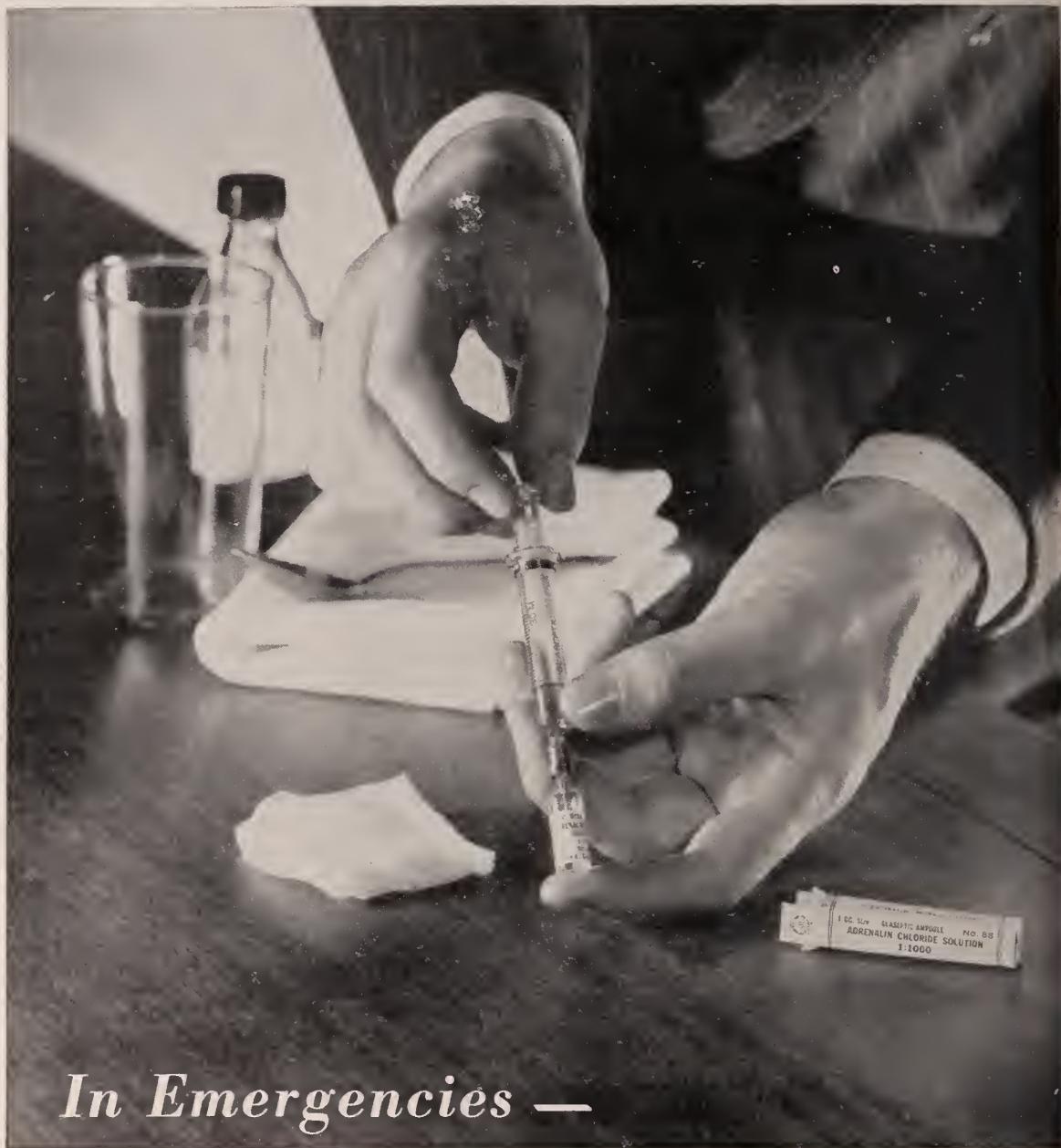
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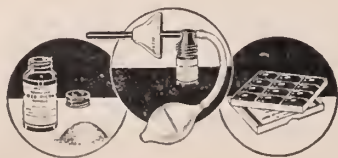
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Adair	N. A. Mercer	Columbia	May 3
Allen	A. O. Miller	Scottsville	May 24
Anderson	J. B. Lyen	Lawrenceburg	May 1
Ballard	F. H. Russell	Wickliffe	
Barren	Rex Hays	Glasgow	May 17
Bath	H. S. Gilmore	Owingsville	May 8
Bell	E. S. Wilson	Pineville	May 12
Boone	R. E. Ryle	Walton	May 17
Bourbon	Eugene L. D. Blake	Paris	May 18
Boyd	Hubert J. Pritchard	Catlettsburg	May 2
Boyle	P. O. Sanders	Danville	May 16
Bracken-Pendleton	W. A. McKenney	Falmouth	May 25
Breathitt	Philip Bress	Jackson	May 16
Breckenridge	J. E. Kincheloe	Hardinsburg	
Bullitt	G. F. Brockman	Shepherdsville	
Butler	G. E. Embry	Morgantown	May 3
Caldwell	W. L. Cash	Princeton	May 2
Calloway	Hugh L. Houston	Murray	May 11
Campbell-Kenton	Joseph H. Humpert	Covington	May 4 & 18
Carlisle	E. E. Smith	Bardwell	May 2
Carroll	J. M. Ryan	Carrollton	
Carter	Don E. Wilder	Grayson	May 9
Casey	William J. Sweney	Liberty	May 25
Christian	D. M. Clardy	Hopkinsville	May 16
Clark	R. E. Strode	Winchester	May 19
Clay	J. L. Anderson	Manchester	
Clinton	S. F. Stephenson	Albany	May 20
Crittenden	C. G. Moreland	Marion	May 8
Cumberland	W. F. Owsley	Burkesville	May 3
Daviess	James E. Hix	Owensboro	May 9 & 23
Elliott			
Estill	Virginia Wallace	Irvine	May 10
Fayette	D. E. Scott	Lexington	May 9
Fleming	Roy Orsburn	Flemingsburg	May 10
Floyd	J. G. Archer	Prestonsburg	May 31
Franklin	Grace R. Snyder	Frankfort	May 4
Fulton	J. C. Morrison	Fulton	May 10
Gallatin	J. M. Stallard	Sparta	May 18
Garrard	J. E. Edwards	Lancaster	May 18
Grant	Paul E. Harper	Dry Ridge	May 17
Graves	H. H. Hunt	Mayfield	May 2
Grayson			
Green	S. J. Simmons	Greensburg	May 1
Greenup	R. L. Compton	Greenup	May 12
Hancock	F. M. Griffin	Hawesville	May 1
Hardin	D. E. McClure	Elizabethtown	May 11
Harlan	W. E. Riley	Harlan	May 20
Harrison	W. B. Moore	Cynthiana	May 1
Hart	S. F. Richardson	Munfordville	May 2
Henderson	J. Leland Tanner	Henderson	May 8 & 22
Henry	Owen Carroll	New Castle	May 4
Hickman	Layson B. Swann	Clinton	May 4
Hopkins	David L. Salmon	Madisonville	May 4
Jackson	Thomas L. Boneta	McKee	May 6
Jefferson	W. B. Troutman	Louisville	May 1 & 15
Jessamine	J. A. VanArsdall	Nicholasville	May 18
Johnson	P. B. Hall	Paintsville	May 13
Knox	W. Parker Clifton	Barbourville	
Larue			
Laurel	Oscar D. Brock	London	May 10
Lawrence	L. S. Hayes	Louisa	May 15
Lee	W. D. McCollum	Beattyville	May 13
Leslie			
Letcher	J. E. Johnson	Jenkins	May 30
Lewis	C. P. Pennington	Vanceburg	May 15
Lincoln	Lewis J. Jones	Hustonville	May 19
Livingston	C. M. Fischbach	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	May 2
McCracken	J. V. Pace	Paducah	May 24
McCreary	R. M. Smith	Stearns	May 1
McLean	A. R. Will	Calhoun	May 11
Madison	C. B. Billington	Richmond	May 18
Marion	W. E. Oldham	Lebanon	May 23
Marshall	S. L. Henson	Benton	May 17
Mason	C. W. Christine	May'sville	May 10

COUNTY	SECRETARY	RESIDENCE	DATE
Meade	S. H. Stith	Brandenburg	May 25
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	May 9
Metcalfe	E. S. Dnnham	Edmonton	
Monroe	George E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mount Sterling	May 9
Morgan	Wallace Byrd	West Liberty	
Muhlenberg	E. L. Gates	Greenville	May 9
Nelson	R. H. Greenwell	Bardstown	
Nicholas	T. P. Scott	Carlisle	May 15
Ohio	Oscar Allen	McHenry	May 3
Oldham			
Owen	K. S. McBee	Owenton	May 4
Owsley	John R. Aker	Booneville	May 1
Perry	D. D. Turner	Hazard	May 8
Pike	H. K. Bailey	Pikeville	May 15
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Frigg	H. L. Wallace	Cadiz	May 31
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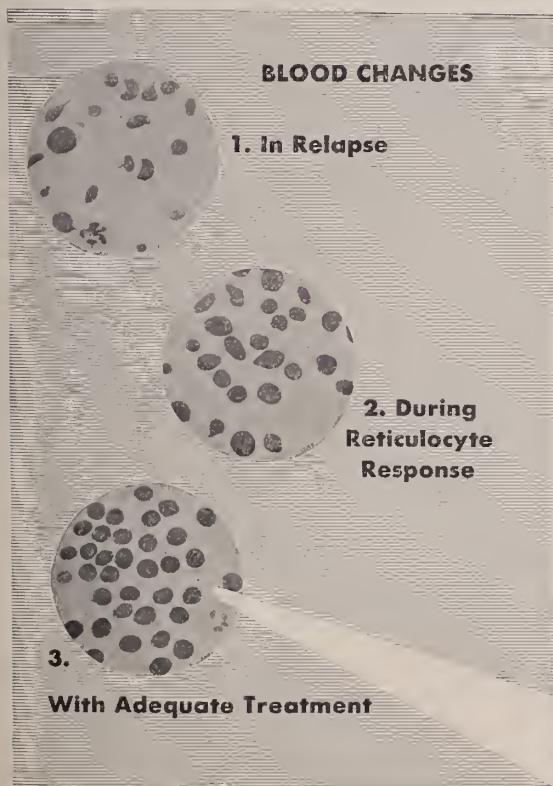
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ORIGINAL ARTICLES

MENINGOCOCCIC MENINGITIS*

T. M. MARKS, M. D., F. A. C. P.

Lexington

Meningococcic infections have always been and are still of low incidence but of high mortality in spite of the tremendous fight against it, beginning with the discovery of the organism by Weichselbaum in 1887. The introduction of antiserum in 1908 by Flexner and others. The works of Gordon and Murray, who during an epidemic among British soldiers in 1915, typed the various subtypes of meningococci into four strains, thereby making the polyvalent serum more effective. The introduction by Ferry in 1932 of meningococcus antitoxin and last, but possibly the greatest of them all, the use of sulfanilamide either as adjunct in treatment or alone.

There is no disease of such variance in mortality rate during different epidemics and in different localities, the treatment routine being the same throughout; there being a change either in the nature and virulence of the disease or in the effectiveness and potency of the sera upon the market at that time.

Primarily, this paper is one of the comparative merit of the various forms of treatment in past and present, attempting to choose the most rational method giving the best results, but there are a few points concerning meningococcic infections that should be mentioned, lessening confusion and hastening that most important factor in any disease—an early diagnosis.

It must be borne in mind that it is possible for a condition of meningococcic septicemia to exist for days or even weeks before meningitis develops, in fact there are at present two schools of thought; one that the infected nasopharyngeal drop goes by direct extension to the meninges through the cribiform plate of the ethmoid bone and the other that the infection is always first a blood stream one

and meningitis a complication of the septicemia.

The latter is a very plausible one and a very safe one to follow as the literature is scattered with reports and we have all seen cases of the fulminating type of meningococcic septicemia with death occurring before there are definite signs of a meningitic condition and before the spinal fluid has become cloudy. Early diagnosis and prompt intravenous treatment with either antisera or antitoxin is our only hope of saving these cases. Diagnosis here depends upon positive blood culture or, when there is a purpuric rash, upon finding of organism upon direct smear by gram stain of blood obtained by puncture of purpuric skin—petechial or purpuric rash is always present in the acute fulminating cases. In cases of high temperature and accompanying symptoms of severe septicemia with purpuric rash and without available laboratory for either culture or smear it would be considered excellent treatment to give a large dose of antitoxin intravenously, especially during an epidemic. The mortality is most high in this type of case under the best of treatment, but hopeless if diagnosis is delayed, as they rarely live longer than 48 hours without treatment—death occurring before there is any definite sign of meningitis—adrenal hemorrhage being cause of death in a fair sized percentage of cases. This, together with usual autopsy findings of a severe septicemia being known as the Waterhouse-Fridericken syndrome.

Blood cultures in meningococcic infections are positive in only 20-30 per cent and depend a lot upon the time taken, the earlier taken the more the chance of being positive, making it imperative to take blood cultures upon first seeing all cases of unexplained high temperatures accompanied by signs of severe septicemia if early diagnosis is made. Herrick reports as high as 80 per cent positive.

In young infants the diagnosis is rarely made early due to many factors—the rarity of petechiae or purpuric rash, the open fontanelles and unclosed sutures increasing the elasticity of the cranial vault and postponing

*Read before the Kentucky State Medical Association, at Louisville, October 3-6, 1938.

for days the signs of intracranial pressure, and also the confusion of the symptoms with that of acute respiratory infection, gastro-intestinal infection or that of acute rheumatic infection. It is the late diagnosis in young infants which is the cause of the high mortality as in the average case the anterior fontanelle is bulging, the eyes have lost lustre and there is frequently block in the narrow foramina or subarachnoid space by inflammatory exudate before treatment is begun. You can readily see how easy it would be to make a diagnosis of purpura rheumatica upon the presence of polyarthritides and purpuric rash without signs of meningitis and then have meningitis develop as late as two weeks later. Of course when there is rash present, signs of meningeal irritation, stiff neck, positive Kernig's, etc, with cloudy spinal fluid positive by smear or culture, the diagnosis is evident.

Flexner and others developed a bactericidal serum in 1908 and in the next few years by its use intrathecally there was a gratifying decrease in the mortality, only for it again to rise in some epidemics to near the rate before use of sera—this leading many to doubt its specific value.

Herrick and others, following the world war, advised the giving of large doses intravenously as adjunct to the intraspinal treatment, but still results were disappointing enough to cause investigators to search for other methods of treatment. Reports reached the literature of the subcutaneous injection of withdrawn spinal fluid, the intraspinal injection of autoserum, the addition of autoserum to anti-serum to make its action more effective, etc. Ventricular or cisterna punctures with serum introduction were done as last resort measure in those cases not showing the expected improvement.

In 1928 Lyons advocated as method of choice, in infants with open fontanelle, serum substitution for cerebro-spinal fluid, introducing serum into the lateral ventricle until serum was obtained through spinal needle, constituting thru and thru drainage with serum substitution, thereby insuring intimate contact of serum with organisms.

He also advised this method with adults not showing response to intraspinal treatment, feeling this much more effective and safer than cisterna puncture even though necessitating trephining. This method was used, after failure to respond to other treatment, in 5 of my cases with 3 recoveries—one recovered case being left totally deaf.

Ferry's anti-meningococcic antitoxin was

introduced in 1931, but mostly as adjunct to usual treatment and in most instances in doses much too small until Hoyne's report in summer of 1936. Hoyne advocated the giving of large doses of serum or antitoxin intravenously with no intrathecal treatment, doing spinal puncture only for relief of intracranial pressure or for diagnosis. Hoyne's initial dose, intravenously, was 50,000 units of antitoxin or 150 cc of serum for a child, 100,000 units or 200-300 cc of serum for an adult, the initial dose being all necessary in some cases. Whether serum or antitoxin given, it should be diluted with two times its volume of 10 per cent glucose in normal saline and given slowly by gravity. Eight cases in his first report were treated by antitoxin intravenously alone, without spinal puncture, all recovered completely—the mortality for his combined groups was slightly over 15 per cent as compared to an average of 50 per cent in the preceding 10 years at Cook County Hospital.

The intravenously treated recovered cases rarely have complications such as deafness, panophthalmitis and post-meningitic encephalitis often encountered in intrathecally treated cases. The putting of foreign protein into the subarachnoid spaces causes a severe reaction in an already critically ill patient, making all symptoms much worse for several hours. This with the danger of block from continued usage, the pain and discomfort to the patient has always been a most serious objection to the use of serum intrathecally. In Hoyne's cases the mortality was slightly lower in those treated with antitoxin than in the ones treated with serum.

Morrison, Levy, Clyde, Neely and others have since reported splendid results with cases treated with antitoxin intravenously alone.

Summary of Hoyne's reports—

1. Meningococcic infection should be interpreted as a blood stream infection with meningitis being a complication.

2. Intrathecal serum therapy prolongs the recovery of the patient.

3. Massive doses of either antitoxin or serum are advised.

4. Ninety-six cases were treated exclusively by intravenous route with mortality of 15.9 per cent. For 43 patients under the age of 20 years, mortality rate was 2.3 per cent.

5. Of 9 cases treated without lumbar puncture, only one died.

6. Fewer complications occurred with Ferry's antitoxin than antiserum.

Sulfanilamide was offered in August 1936

for treatment of hemolytic streptococcal infections with great success and further investigation has shown sulfanilamide to have a definite bacteristatic action upon meningococci.

April 1937, Schwentker, Gelman and Long gave their first reports of the treatment of meningococcal meningitis with sulfanilamide alone, giving results in ten cases of meningitis and one of septicemia alone. Sulfanilamide was used in 0.8 per cent solution in normal saline, the needed amount of normal saline being brought to sterilization by boiling, removed from flame and immediately the required amount of the powdered drug added. The solution cooled to body temperature and given at once. The age of patients treated was from 1 to 34 years with no selection of cases. All were treated by both subcutaneous and intraspinal injection of the drug.

As soon as diagnosis was made 10 to 30 cc, 5 to 10 cc less than spinal fluid withdrawn, was injected intraspinally and a much larger amount, 100 cc for each 40 pounds body weight (18 Kilo.) was given subcutaneously. Both to be repeated every 12 hours for first two days and once a day thereafter until definite improvement noted both clinically and in the spinal fluid. Of the ten cases treated, nine recovered, one seemingly upon road to recovery developed pneumonia and died upon the fifth day.

Willien, in the 1937-38 epidemic in Knoxville, Tennessee, through clinical observation and testing of spinal fluid for drug concentration, found that when sulfanilamide is given by mouth alone to saturation, the spinal fluid concentration is just a little less than that of the blood. In his report of 5 cases, an initial dose, according to age, was given subcutaneously to saturate the tissues and bring about high concentration of the blood. All further treatment was by oral administration—the subcutaneous dose was larger by 50 per cent than that used by Long and associates and future doses, by mouth, the upper limit of usual oral administration. All 5 cases recovered.

The collected cases reported of sulfanilamide treatment alone are too small in number to advocate this treatment alone without the use of either antitoxin or serum, but the results reported are by far the most encouraging of all forms of treatment with many things in its favor such as:

1. Simplicity of treatment.
2. Cost as compared to use of either antitoxin or serum.
3. The advantage of usage in sparsely set-

tled areas with few doctors covering large territory in that the initial dose subcutaneously can be given and instructions given for further oral treatment when no hospital available and when impossible to see patient as often as necessary.

4. Absence of severe reactions and complications from the introduction of serum into the subarachnoid spaces or the serum reactions when given intravenously.

The only serious complication of the sulfanilamide therapy is susceptibility to the extent of producing hemolytic anemia, meaning treatment must be stopped and transfusions given and treatment with either antitoxin or serum begun. Also sulfanilamide being bacteriostatic and not bactericidal, treatment must be continued for at least 10 days after the patient has apparently recovered to prevent recurrences.

It seems that serum intraspinally is on the way out and that choice of treatment lies between antitoxin intravenously alone, in combination with sulfanilamide or sulfanilamide alone either subcutaneously and intraspinally or subcutaneously and orally.

I have used sulfanilamide as an adjunct to both antitoxin intravenously and serum intraspinally but never alone, my cases having been few in number since its introduction and do not feel in any way competent to give an opinion for or against this form of treatment, but it would seem logical and wise, especially in those cases with rash showing the severity of the disease, to give initially a large dose of antitoxin intravenously and then initiate sulfanilamide therapy, if future reports are as encouraging as those lately reported.

DISCUSSION

Philip F. Barbour, Louisville: Dr. Marks has given us a very interesting paper and a very valuable paper. My first experience with meningococcus meningitis was with the fulminating type, both cases of which died within 15 hours of onset.

Flexner's experience with the meningococcus serum many years ago showed that it was not only antitoxic but antibacterial, and with that started the administration intrathecally of the meningococcal serum, which certainly has cured a great many of these cases. We have all found that after the administration of the meningococcal serum in the spine, we get to the point where we are a little bit dubious as to how long the injections of the serum should be continued. If you examine the spinal fluid you find no bacteria in it, but you are afraid to stop giving the serum for fear you have not given enough, for your spinal count is going to be

high still—you will find 500 or 600 cells due to the irritation of the serum itself as Dr. Marks pointed out. In many of these cases it has been quite a question as to how long to continue giving the intraspinal serum.

The essayist said that there are not many cases reported of sulfanilamide treatment of meningococcic meningitis. There are not a great many physicians that have had an opportunity individually to treat a great many cases with sulfanilamide, but the Academy of Pediatrics has taken up this matter within the past year, and has a report from children's hospitals all over the United States, some eight or ten, and the quantitative result of that study was that sulfanilamide had proved an exceedingly helpful and reliable treatment for meningococcic meningitis.

Dr. Marks brings out one point that I think it is well for us to bear in mind, and that is that it is most probable that meningococcus meningitis is a result of a blood stream infection, meningococcemia. Of course administration of serum in the spine will get rid of those bacteria which are in the spine. But it seems wise to give the meningococcic serum in the blood stream and get the meningococci killed before they get into the spinal canal. I believe this has been one of the greatest advances in the treatment of meningococcus meningitis.

I doubt whether if I had meningococcus meningitis in a member of my family, I would be willing to treat it with meningococcus serum alone or with sulfanilamide alone when there is no real reason why they cannot be used both at the same time.

Meningococcus serum can be given intravenously and intraspinally, but give your sulfanilamide in large enough doses. We do not here fear a cyanosis that sometimes occurs with sulfanilamide administration. In our Children's Hospital we get our children cyanosed a good many times, but go right along with the sulfanilamide, and it does not seem to produce any great damage to them. After you get your disease cured you can administer blood or give other things to restore the blood, and the cyanosis is not a very toxic cyanosis.

The Doctor's suggestion that in every case of a patient who is septic or seems to have a septicemia we should bear in mind the possibility of meningococcic infection of the brain afterwards, certainly should make us suspicious of these cases that this may develop into something quite serious.

I think we all have a very much more hopeful attitude toward meningococcus meningitis. The essence of the thing is the promptness with which you begin your treatment. Certainly if you wait very long, your case, if it gets well, is going to have some of those nerve manifes-

tations, blindness, deafness, and so on, that make the outcome so disastrous.

Robert Cohen, Louisville: Being a former resident of Dr. A. Hoyne of the Cook County contagious unit, I naturally would push his successful methods of attacking and treating meningococcus meningitis. First I wish to state that spinal punctures are not always necessary for the diagnosis of epidemic meningitis. A good deal of this procedure has been curtailed. The concomitant signs and symptoms present for a suspected case of epidemic meningitis are considered after the ears are ruled out for a possible streptococcus meningitis, no ethmoid involvement or scalp or skull pathology present which might cause staphylococcus, pneumococcus, or streptococcus invasion of the meninges. There are petechiae, purpuric, macular, or morbilliform, usually present in 50 per cent of the cases. If you have good technic you can recover the Gram negative organism from puncturing a few of these spots with an ordinary sterile needle. However, routine blood cultures are taken and poured into dextrose broth solutions for incubation. Whether the case is a meningococcemia per se or already localized to the meninges, the majority of the cultures turn out positive for epidemic meningitis.

There is no waiting for the laboratory report. One patient receives meningococcus antitoxin and the second patient receives antimeningococcic serum. There is one and only one route used for the treatment, and that is the intravenous one. The majority of patients seen lack fluids. To either solution used, 15 drops of adrenalin are added to overcome anaphylactic reactions and to minimize serum reactions. To the antitoxin 10 per cent dextrose solution is added, usually 250 cc. to 1000 cc., and to the antimeningococcus serum only normal saline is added. The hypertonic dextrose has a tendency to congeal this serum. The initial doses are always large, the antitoxin from 50,000 to 150,000 units, the serum from 90 to 1150 cc. If no definite response is seen in 18 hours to 24, another intravenous is given about one-half the first dose. Still if the case is not responding, repeat the second dose. Do not hesitate to give another if no results are seen.

In private practice the serum price is naturally brought to mind, but it is always cheaper than a funeral. A nurse at the Cook County Hospital who developed epidemic meningitis received 660,000 units before overcoming the infection. All infants are given intravenous cut down procedures for treatment. In spite of the opisthotonos cases seen on entrance, twenty-four hours later you would not know you were in the meningitis ward as the patients are lying on their backs or sitting up and showing signs of responding to treatment.

Please hold one thing in mind. If the patient has nuchal rigidity about the seventh day of hospitalization, it is usually from the serum arthralgia and clears easily.

With this procedure I have treated sixteen straight cases in the winter of 1937 without a complication or recurrence. This procedure has certainly eliminated the complications which ensue in the intraspinal method of treatment. The cases varied in age from six months to fifty-seven years of age, and included three children of the same family.

The question always brought up is that of the mildness of the infection. The answer is that the infection is of such attenuation as to give ten cases opisthotonos. Should you unfortunately encounter a case of meningococcemia with rapid death, please have the pathologist look at the adrenal glands meticulously. He may surprise you by finding the Waterhouse-Friedrichsen syndrome, that is a symmetrical apoplexy of the adrenals.

A. A. Shaper, Louisville: There are several points I would like to bring out in relationship to sulfanilamide. I have reviewed practically all the literature published in the English language on sulfanilamide. We find as to sulfanilamide connected with meningococcic meningitis that a great deal of the early work and some of the best work has been done in England and Scotland. I compiled approximately thirty cases in the English literature and numerous cases in this country where the meningococcic meningitis was treated solely with sulfanilamide. One author treated three series, the first with straight meningococcic serum, and his mortality was highest with serum. He was lower with antitoxin, and his lowest figures were with sulfanilamide alone. He however, believed, and I feel the same way, that the treatment of meningitis of the meningococcic type will finally come to the point where we use antitoxin intravenously and sulfanilamide by mouth. If they are unconscious it can be given by catheter into the stomach.

Most authorities believe there is no use (I hate to differ with Dr. Marks) in the subcutaneous or intrathecal sulfanilamide. There is no need of giving it. In fact, the absorption is slower by subcutaneous administration than by mouth. As far as prontosil soluble, the choroid plexus does not permit the drug to go through as readily as sulfanilamide, so stick to sulfanilamide alone.

In the cases of meningococcic meningitis we find in 48 to 72 hours the spinal fluid becomes sterile. If you have a case that has been sick for several days you probably will have failure with sulfanilamide; use your antitoxin along with it.

Another factor brought out with sulfanilamide is its value in carriers. In chronic men-

ingococcic carriers the use of sulfanilamide is indicated. Whether or not it will be beneficial only time will tell. Another thing about sulfanilamide is in exposed cases it is a very useful drug where there has been contact and there has been a desire to prevent the exposed cases from coming down with meningitis.

A. T. McCormack, Louisville: Let me give you a warning in regard to the use of sulfanilamide for the prevention of any disease. It should only be administered under the very careful supervision of a physician and should not be generally recommended for any purpose. It will not be permitted to be sold for any purpose except on the prescription of and administered under the charge of a physician. It is important for us to get the public to understand this. We must not talk about sulfanilamide like we did about aspirin when it started out and was going to be the antidote for every disease, it was going to cure everything on the face of the earth, it was going to be the only answer to prayer for a cure for all diseases, and we are about to get just as crazy about sulfanilamide. Just remember that there is no panacea for all diseases, and that the intelligent physician is going to discriminate in his use of drugs. This is a very dangerous drug and should only be used and only recommended by physicians and should not be talked about to the public at all.

Thomas M. Marks (In closing): I should just like to report one case. It sort of reminds me of the story of putting all your eggs in one basket. This child, twenty-six days before coming to the hospital, had had what seemingly was a measles rash, but it never recovered, and on the twenty-sixth day the family physician decided that the child had meningitis. It was four months old when taken sick and was not quite five months old when it was first brought in. It didn't look like it would live twentyfour hours, as there was a block; I could get nothing from the spinal cord, just two or three drops of clear fluid. In tapping the ventricle it was about half pus, so I did a serum substitution, forced the serum through from the ventricle until it came out in the spinal needle, gave it 30,000 units of antitoxin, twelve hours after that it was taking its bottle, so I gave it sulfanilamide in its bottle and by using all three the child recovered very nicely. It is the only child under the age of eight months that I ever had to get well. As I say, I used all three, the serum intraspinally, sulfanilamide by mouth, and the antitoxin intravenously.

The cure for a headache in the sixteenth century was to drill a hole through the patient's skull to provide an exit for the evil spirit causing the disturbance. (It was also a treatment for insanity and epilepsy.)

A CONSIDERATION OF THE PROBLEM OF LOW BACK PAIN—THE ORTHOPEDIC POINT OF VIEW*

W. BARNETT OWEN, M. D.

Louisville

All of the problems connected with low back pain have not been definitely solved, mainly due to the difficulties of discovering the exact cause and location of the pain complained of. However, extensive studies have been made by many groups of the medical profession who are particularly interested in this phenomena. Low back pain is one of the most frequent symptoms complained of during adult life.

A very careful and pains-taking history is necessary in every obscure case. Next in order is a complete and thorough physical examination, consisting of investigation of all possible foci of infection and of the postural and structural situation in each individual case. There are certain definite Orthopedic Tests which are resorted to as routine. First, patient should be stripped and instructed to stand in the usual manner in which they are accustomed to standing. This will enable the examiner to inspect the shoulders, the character of the lumbar curve, whether or not there is scoliosis or lateral deviation of the spine, the angle of the pelvis in relation to the spine and position of the limbs. The feet should be examined to see if they are relaxed and pronated. Then, while the patient is standing, the spine should be hyper-flexed, hyper-extended and moved to the extreme limits, laterally, keeping the knees together. Location of point pain and muscle rigidity can many times be discovered by this examination alone. Then patient should be placed on the table in the prone position and straight leg raising of Goldthwait should be employed to determine the degree and location of pain, if any, along with the degree of muscle spasm experienced by the examiner by placing one hand over the lumbo-sacral and sacro-iliac joints and the other hand beneath the heel, keeping the knee in complete extension and hyper-flexion of the hip. If the normal range of hip flexion is greatly reduced usually the pain will be over the affected sacro-iliac joint. Further hyper-flexion of the hip may elicit pain in the lumbo-sacral joint if the lumbar muscles are put into action. Should one sacro-iliac joint become painful by this pro-

cedure further test should include Gaenslen's sign, which is placing the patient in the prone position on the edge of the table on the well hip. The well hip is flexed, the knee flexed to the chest and the leg of the affected sacro-iliac joint is forced into hyper-extension and abduction, thereby placing a reverse strain on the sacro-iliac joints, causing pain over the affected joint. Should there be a restriction of the ilio-tibial band, the sign of Ober can be determined by allowing the patient to lie on the well side, flexing the thigh and knee sufficient to obliterate the lumbar curve in the spine and at the same time the affected side should be abducted, hyper-extended and rotated internally, while the knee is flexed to right angle. If Ober's sign is positive the thigh will not go into the position of adduction but will remain abducted. Definite tightness can then be felt over the ilio-tibial band just above the greater trochanter.

Heading the list of causative factors of low back pain is infection, either focal or local. Next in order is trauma and strain. Third, posture. Fourth congenital anomalies, and fifth, intra-spinal pressure, which, if present, will be either caused by fracture, dislocation, new growth, rupture of the nucleus pulposus or hypertrophy of the ligamentum flava. The usual clinical symptoms being that of pain, usually slow onset, the pain being referred down the course of the nerve roots so impinged upon. A fair amount of knowledge can be determined by the persistence of this pain equally as great, or sometimes more aggravated when in bed. The sensory nerve will be partially affected. The usual case will have pain referred down the back of the thigh, calf and to the heel; a sense of numbness, absence of Tendo Achilles reflexes, pain being aggravated by any strain such as coughing, sneezing or strain at stool.

In these cases all conservative methods have been tried and have failed to produce any relief. On the other hand, the pain persists and becomes more aggravated in most instances. In such cases, a good neurological surgeon should be asked to make complete investigation and determine whether or not this is a suitable case for lipiodol injection and further X-ray study. If the point of pressure can be determined, removal of the nerve root pressure is in most instances sufficient to relieve the pain. Proper structural correction, postural training and muscle re-education is indicated in every case. A

*Read before the Jefferson County Medical Society.

large percentage of low back pain can be relieved by adopting conservative methods such as complete rest, proper support, application of heat and re-education of the muscles and prevention of further strain, until relief has been attained.

Of the severe and persistent cases of low back pain which we have encountered it has been necessary to resort to fusion of the sacro-iliac joint or the lumbo-sacral spine in about 10 per cent of the cases. This procedure offers relief for a very high percentage of the extreme cases. It is necessary to keep the patient in bed following the fusion operation for at least a period of three months, after which a spinal brace is applied and worn for at least a year following the operation, the brace being removed when the patient is put to bed. The bed should consist of a flat, hard surface which does not permit straining of the lumbar spine. A simple method is to place large, wide boards beneath the mattress, preventing sagging of the bed. Even in the operative cases, conservative measures should also consist of instruction in posture and re-education of the muscles and ligaments, paying particular attention to the structural balance of the body. While complete X-ray study is employed in all cases, there is a great percentage of beginning arthritic changes which are quite painful before any visual change can be noted by X-ray films. As a contributory cause in low back pain, it is necessary to have the kidney and prostate investigated. Any rectal tumors and infections should be eliminated, also any pelvic masses or infections should be borne in mind.

Spinal fusion operation is only indicated in disabling congenital anomalies of the lumbo-sacral articulation, sacralized fifth lumbar, spondylolisthesis, fractures and dislocations. Only then, after systematic and conservative treatment has been thoroughly tried and failed. I do not want you to gain the impression that a large percentage of back injuries should be treated by spinal fusion, but I do feel that those cases which are persistently painful and have not responded to treatment should have more radical methods instituted.

Reduced to commercial products, the human body contains fat for seven bars of soap, enough phosphorus for two thousand matches, enough lime to whitewash a small house, enough iron for two nails, two pounds of sugar, six teaspoonsful of salt, ten gallons of water, one dose of magnesia and a small amount of sulphur.

LOW BACK AND SCIATIC PAIN FROM THE STANDPOINT OF THE NEUROSURGEON*

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Louisville

Dr. Owen has spoken to you of the general problem of low back and sciatic pain. He has quite properly emphasized the many pathological states associated with these symptoms. The possibilities of mechanical disturbances in the lower spine and pelvis are many and varied; therefore, an attempt to analyze the etiological factor in every case of low back and leg pain is a broad, time-consuming problem.

My discussion this evening is limited to the consideration of intraspinal causes of low back and sciatic pain. Just what the ratio of intraspinal lesions is to the broad general problem is of academic interest only. We do not advise neurosurgical treatment of these patients unless their pain and disability have been found to be intractable to conservative measures.

The intraspinal lesions under consideration are herniation of the nucleus pulposus, hypertrophy of the ligamentum flavum and intraspinal neoplasms. All of these pathological entities produce symptoms indistinguishable one from the other; therefore, my remarks are applicable to all three.

ANATOMY: Accurate localization of lesions in the lower lumbar neural canal from clinical findings alone will continue to be a difficult problem due to anatomical peculiarities of the region. To refresh your memory I shall review a few pertinent anatomical facts.

In the human embryo of three months, the cord occupies the entire length of the vertebral canal, and the spinal nerves pass lateralward to their exits through the intervertebral foramina. As growth occurs, the vertebral column increases in length more rapidly than does the spinal cord, and, as a result, the cord ends in the adult at the lower border of the first or upper border of the second lumbar vertebra. Consequently, the nerve roots run in a caudal direction from their origin in the cord to the same intervertebral foramina through which they made their exits before the cord had shifted its position. Since the cord ends at a higher level in the adult, the roots of the lumbar, sacral, and coccygeal nerves in order to reach their proper foramina descend vertically in the canal,

*Read before the Jefferson County Medical Society.

forming a large bundle called the cauda equina. The neural canal in the lumbosacral region is larger than at any other point in the vertebral column. Furthermore, the actual volumetric contents of the nerve roots in this region are less than at any other point in the neural canal. Also, there is more spinal fluid in which the roots float in this area than at any other point and, as a consequence, larger spinal lesions may be present in this area than in any other portion of the neural canal without causing disabling symptoms. The nerve roots of the cauda equina are freely movable except at the points of exit at the intervertebral foramina. At these points they are quite firmly fixed.

Lesions of the cauda equina may produce symptoms identical to lesions of the corresponding peripheral nerves. Unless the lesion involves one nerve root alone and, therefore, gives pain without sensory loss corresponding to the skin segmental distribution of that root, it may be most difficult to localize its exact site. Many intraspinal lesions are sufficiently large to produce intractable pain, yet yield negative findings on careful neurological examination, i.e., normal sensory test, normal motor function and normal reflex activity. This is easily explained when one considers the large size of the neural canal in the lumbar region and the freely movable roots of the cauda equina. A large lesion in this region may freely shift the caudal roots, except at their fixation points, without producing destructive symptoms and signs.

SYMPTOMS: There are certain symptoms especially important in the examination of this group of patients. The following statements are based upon an experience with seventy cases of low back disability treated surgically: Previous episodes of back or sciatic pain are important. Exaggeration of the pain on coughing or sneezing may have been present at one stage of the illness and absent at the time of the examination. However, if it has occurred during the course of any of the episodes of back or leg pain it is important.

LOW BACK PAIN: Usually the episodes are ushered in by an acute exquisite pain in the lower back. The pain is frequently initiated by straining or lifting in a bent-forward position. Many patients describe the sequence of events as "something gave way in the back" and this is immediately followed by excruciating backache. Often the patient has difficulty in straightening up and is more comfortable in a bent-for-

ward position. During the acute episode the back pain may be relieved by lying down, particularly on the face. However, many patients are more comfortable standing than lying. Some get no relief in any position. The backache in the beginning may or may not be associated with leg pain. The episode of back pain may disappear completely and the leg pain appear weeks or months later.

LEG PAIN: Pain in the sciatic distribution when present is the most useful symptom diagnostically. We have a number of proven cases in which pain was limited to the back, gluteal region or posterior thigh. Other patients have had incapacitating backache over a period of several years before a true sciatica occurred. We believe that the sciatic pain represents actual pressure from the herniated pulposus material as it slips lateralward and involves the roots at their points of fixation.

Another characteristic of the pain both in the back and in the leg is that it is intensified by coughing, straining or sneezing. The fact that this pain may be exaggerated by these maneuvers is not pathognomonic of intraspinal disease, however, because acute neuritis associated with sacroiliac disease or inflammatory lesions about the roots extrinsically may be associated with the same phenomena.

NUMBNESS: Many of these patients (70 per cent) complained of numbness in some portion of the affected leg. Usually the numbness involves the foot or outer aspect of the ankle or leg.

WEAKNESS: Thirty per cent of our patients complained of weakness of the involved extremity. In some cases this is a major complaint; in others it is only elicited on careful questioning. In but one of our cases had the weakness progressed to the point of muscular paralysis involving the anterior tibial muscle.

SIGNS: In all cases of low intraspinal disease some stiffness of the lumbar spine is observed. Usually the spine is straight and the normal lumbar curve is obliterated. When palpated, the lumbar muscles are tense and spastic. Bending forward exaggerates the muscle spasm and usually the pain. In many patients there is tilting of the pelvis away from the side of the lesion. Local tenderness to percussion or palpation is frequently present over the involved vertebra. Sciatic tenderness to pressure was consistently present in all of our patients with acute leg pain. The Lasegue test is a most important one for demonstrating sciatic in-

vovement. It is performed by flexing the thigh at right angles and extending the leg to the point of discomfort; then the foot is dorsiflexed sharply and if this exaggerates the pain the test is considered positive. This test was almost uniformly positive in the group with herniation of the nucleus pulposus. The Naffziger test is important evidence when positive. By occluding the jugular veins and producing venous stasis of the brain, the intraspinal pressure is raised. If the pain is intensified by this maneuver it is considered positive evidence of intraspinal disease. Sensory examination is important in differentiating these lesions. Usually some sensory loss can be demonstrated in the skin segment of the involved roots. These sensory tests should be made with pin prick, heat and cold, and light touch. We are often able to demonstrate sensory loss with the heat and cold test whereas it would have remained doubtful after examination with pin prick. Motor weakness was demonstrated in 10 per cent of our cases. Since no muscle of the leg is innervated by a single root, involvement of one root alone will seldom produce paralysis; consequently, only weakness of the involved muscle is to be expected. Fibrillation of muscles occurred in four cases in our series. When fibrillation occurred some degree of atrophy has usually been observed.

REFLEXES: In the majority of cases of herniated nucleus pulposus occurring at the fifth lumbar interspace there was alteration of the tendo achillis reflex. It may be diminished or absent as compared with the other side. This sign, when associated with the characteristic symptoms, is strong confirmatory evidence of the location of the lesion at the fifth lumbar interspace. Other regional reflexes should be unaffected unless the lesion occurs higher than the fourth lumbar interspace.

A discussion of treatment, prognosis and end-results does not properly belong in this symposium. However, I feel a general statement of these phases of the problem is pertinent. First, the proper treatment for the intractable cases is surgical removal of the lesion. Conservative measures should always be followed in treatment of the acute cases. Second, in cases properly selected for surgery, we know of no more gratifying results than those following operative removal of these lesions. The relief of symptoms is immediate and in so far as our present information goes, the relief is permanent. The period of post-operative disability is short. The patients are usually back on their job at the end of three weeks.

THE ROENTGEN RAY EXAMINATION IN INDIVIDUALS SUFFERING FROM LOW BACK PAIN*

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In the study of the above problem films of the lumbar spine, pelvis and proximal thirds of the femora should be made in antero-posterior and lateral positions using the Bucky Diaphragm. In addition to this it is well to make films of the lumbo-sacral area in both the right and left oblique positions in order that the lateral articulations and foramina may be examined. The films should be examined carefully for evidence of destructive disease, arthritis, congenital anomalies and for any other variations from normal.

After conservative methods of treatment and orthopedic measures have been exhausted without relief, a careful neurological examination should be done. If symptoms and signs presented definitely indicate the probability of intraspinal pathology then, and only then, lipiodol may be injected into the lumbar sub-arachnoid space.

The X-ray examination after the lipiodol injection consists of a careful fluoroscopic observation of the column of lipiodol as it passes up and down the canal with changes in the position of the patient. In a normal canal the lipiodol is seen as a symmetrical column as it passes upward and downward. If there is an abnormal mass encroaching upon the canal a corresponding defect in the column of lipiodol will be detected as the column passes the region of the mass. The degree of encroachment will vary with the size of the mass and may be shown as a tiny defect or as a defect of increasing size which in some instances may completely obstruct the canal.

The encroaching mass may be due to a tumor, a herniated nucleus pulposus, a markedly hypertrophied ligamentum flavum or to some more generally recognized condition such as metastatic lesions of the cord or its surrounding structures, infections with abscess formations, traumatic disturbances of the bones surrounding the canal, etc. In most instances the first three lesions mentioned cannot be differentiated with certainty by X-ray but this is of little importance for their treatment is the same.

Lesions causing very severe symptoms may cause slight changes in the behavior of the column and it is only by the closest cooperation between the radiologist and the neurosurgeon that an accurate diagnosis can be arrived at.

*Read before the Jefferson County Medical Society.



Courtesy of Radiology

The illustration at the top of the page shows a complete block of the lumbar subarachnoid space at the level of the 4th lumbar vertebra. A large herniated nucleus pulposus was found at operation and removed. The patient made an uneventful recovery.

The middle illustration shows absence of the root sleeve of the left 5th lumbar nerve. At operation a small herniated nucleus pulposus was found extending into the foramen of this point and was seen to impinge upon the root of the nerve. Recovery was prompt and uneventful.

The lower illustration shows a small defect on the right at the level of the lower margin of the body of the 5th lumbar vertebra. This became evident only as the column of opaque material passed upward and became thin. The herniated nucleus was removed at operation and a prompt and uneventful recovery took place.

The films made should record the maximum detail and should be made in series as the column passes the point of suspected pathology as was indicated by the neurological examination. Such films should be made even if no defect is noted with fluoroscope for they may record small defects that cannot be seen by fluoroscopy.

If the above conditions as they relate to the examination with lipiodol are satisfied very few negative examinations will be done and very few organic lesions will be overlooked.

TRAUMATIC SURGERY*

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I have chosen this subject because it is of as much interest and importance to the general practitioner as to the specialist. Regardless of the field of endeavor in which we are interested, we are all at one or another time called upon to treat the injured. The severity or selectivity of the injury is not limited to any locality, and often the most inexperienced is called on to handle the most severe type of injury. The automobile in its present speed and more speed is taking the problem of traumatic surgery, not only to the city and the industrial center, but to the remotest rural section as well.

There is a great need for education of the public, and especially highway patrol officers as to the proper handling of the injured until some member of the medical profession can take charge of the case. Too frequently these individuals are crowded into an automobile by some well intended individual and rushed to a hospital or doctor's office and are much more severely injured by the ordeal and mode of transportation than by the original injury. Many simple fractures are converted to compound fractures, many spinal cord injuries result that would not otherwise occur, open wounds are gravely infected and hemorrhage increased. The doctors in any community in a little time could correct a lot of this by instructing their local ambulance crews, foremen and superintendents of various companies where injuries are apt to occur and especially the highway officials.

When one is called on to treat one of these individuals, a quick survey should be made and within a very short time an opinion can be made as to the gravity of the condition. The pulse is probably one of the first and most important points to consider and will give one an instant idea of the condition of

*Read before the Bell County Medical Society.

the circulatory system. Visible hemorrhage may be noticed, the size and location of any injuries that are self-evident will be noticed. Emergency orders can then be started and the examination continued or delayed as the immediate condition would seem to warrant.

The most important thing to do first in any injury is to control hemorrhage should there be a hemorrhage of any extent. The control of shock is next most important and this can best be done by control of hemorrhage, relief of pain and the adequate splinting of any broken bones. All broken bones should be splinted where the patient lies at the time of injury and before any movement whatever is permitted. If this is done, much pain and shock will be prevented, compound wounds will be averted, injury to important blood vessels and nerves will be avoided and many limbs that might otherwise be lost will be saved.

In splinting these injuries, no elaborate material is needed. All that is needed is a good, rigid piece of material (board, rod of iron, heavy wire or anything else that happens to be at hand). The splint should be long enough to immobilize the joint above and below the injury. Padding is important and clothing can be used if no better material for padding is at hand. Before going into the treatment of fractures, I wish to consider the treatment of soft tissue wounds.

Incised wounds should be cleansed and accurately sutured with fine suture material. The edges should be carefully approximated, being sure there is no turning under of the edges and this is especially true of wounds of the face. Infection will not occur in these wounds if they are properly closed. Large wounds with considerable loss of tissue structure require very skillful handling if they are going to heal without infection or without large scarring and much disability. These wounds should be cleansed with soap and water; all grease and oil removed with ether and then the entire area generously gone over with some of the good antiseptic solutions, being careful to get into all the dead spaces or under cut surfaces. A wide area of the skin around the wound should be prepared also. All devitalized tissue should be cut away, but no good tissue should be sacrificed, and this especially, is true when it comes to tendon or nerve. The wound should then be closed without tension. Should it be impossible to close the wound without tension, leave it open, because a wound closed under tension is much worse than one

not closed at all. Infection is sure to intervene with all its disastrous consequences when too much tension is used. It is much better to leave the wound open and, if not too large or on the face, to let it close by granulation than to suture under tension with the result that the wound will slough open later with a much larger area that will take much more time to heal and with a much greater soft tissue damage. Large wounds with extensive loss of skin should be closed with skin grafts; this is especially true on the face. It is important to use full thickness grafts over tendons and nerves. Again I wish to state that the extensive debridement done in war surgery is not necessary and is destructive to good tissue in the average wound. Definitely devitalized tissue should be cut away. Large wounds on the arms, hands, or legs should be splinted. Infection is much less apt to occur in a wound that is put to rest by splints than in one that is not, as the muscular pull and movement not only tend to spread the infection but this breaks down the walling off process and prevents the building up of resistance. Should there be any dead space in the wound, a small drain of non-irritating material should be placed in the wound.

Very careful examination and close watching is required of any severely injured case. Do not allow one major injury, such as a fractured skull, cause you to put the patient to bed and order watchful waiting while the patient goes on and dies from one or two other major injuries which were really more urgent than the skull fracture. The present speed of most machinery and especially automobiles, is causing these people to be hit with terrific force and one individual may receive a fractured skull and a rupture of the bowel, mesentery, liver, spleen, kidney, or other vital organ at the same time, and if noticed early, the results might be far different.

I recently had a case that was brought in in a coma with a basal skull fracture, compound fracture of left forearm, fracture of left femur, and a ruptured kidney. This man was saved but could have bled to death had I been content to have stopped my investigation after finding three major injuries. I could cite many cases along this line, and can think of some in which I did not recognize the actual severe injury that caused death until after it was too late, because of other major injuries which attracted all my attention. Now, I am not recommending too much handling of these severely injured people before they have had a chance

to recover from the shock, but I am recommending a constant vigilance and continuing of examination as the condition of the patient will permit until all the systems and organs of the body have been investigated.

All head injuries should be considered serious until proven otherwise, and this is especially true when the patient has been unconscious, regardless of how short a time. These patients should all be put to bed for a period of not less than twenty-four hours. I would like to cite a case in which a boy fell from a mule, he was dazed but not unconscious. A doctor was called and the only complaint the boy had at the time of the visit of his family physician was headache. The patient was not thought to be seriously injured and he was allowed to continue up and about. Late that evening he fell suddenly into a coma and when I saw him was in a deep coma from a hemorrhage of the middle meningeal artery. The skull was opened and a large blood clot found, with the bleeding vessel still active.

I will not attempt in this paper to go into detail of treatment of skull fracture, but I do wish to call your attention to some very important facts in the consideration of this condition. I consider all depressed skull fractures emergencies and immediate operation indicated. Should these patients be subjected to the usual waiting period for the recovery from shock, there will be permanent destruction of brain tissue with resultant permanent paralysis and impairment of important organs that would not have occurred should the bone have been elevated early so that regeneration can take place. Likewise, compound fractures are emergencies and should have immediate attention. They should be carefully cleansed, all dirt and debris removed from the wound, pieces of bone removed from the brain tissue and the wound closed with some type of drainage. (I usually use some small strands of cat gut.) Pieces of bone should not be thrown away, but cleansed and placed back as nearly anatomically correct as possible. They will grow in practically every instance. In all other types of skull fracture, I believe in conservatism in treatment, allowing the condition of the patient to dictate the procedure to follow. For the benefit of the general practitioner, I again wish to emphasize the necessity of considering all head injuries as serious and insisting that these cases go to bed. It is not necessary that they be hospitalized until proven necessary, but it is important that they be put to bed and a careful check kept on their pulse and blood

pressure. A slowing of pulse beat with a drop in blood pressure is always indicative of trouble and the warning should be heeded and can be observed in many cases before the patient has lapsed into coma. Many of these cases will appear alright and go on about their work, then suddenly go into a coma and death within a very few minutes after losing consciousness. Many such cases have been casually observed by a physician and allowed to continue work when they should have been put to bed.

A very forceful example of this kind was unfortunate enough to happen to a nurse's father recently. The patient was a very large man, strong and healthy; engaged in the lumber business. He was riding in the cab of one of his trucks when they hit a large hole in the road. He was bounced up against the top of the cab. He and the driver paid little attention to the injury at the time. He kept complaining all afternoon as he worked about the injury. That evening he called a doctor to examine him. The injury was considered of no importance and he went to work the next day. However, he complained all day of a severe headache and weakness. That evening, on walking into the house, he suddenly fell unconscious and was dead within a very few minutes.

We all know the importance of early immobilization and careful handling of all back injuries; yet, with all our knowledge and facilities of making a diagnosis, far too many of these conditions are allowed to go untreated until pressure necrosis has caused irreparable damage. One of the most important signs of a fractured vertebra is finger point tenderness over the vertebra. This symptom is always present if carefully sought for and when found, the patient should be handled as though a fracture was present until proven otherwise by X-rays taken both in lateral and antero-posterior position. When doubtful, get an oblique view. In other words, it is possible to diagnose a fractured spine in practically every case when the injury is first seen, by applying the knowledge we have, without waiting for X-ray, and thereby save the patient a lot of damage from rough handling or maybe continuing work with a severely injured spine.

In treating spinal injuries, regardless of what location in the spinal column, I believe in conservatism. There are a few cases that laminectomy or other type of open operation is indicated but by far the greatest majority can best be handled by hyper-extension and fixation with plaster. For fractures of the

cervical spine, I favor head traction, either using a halter or skeletal traction, the tractor points being placed over each parietal eminence.

In the consideration of fractures of the long bones, I will be forced to hold my discussion within the limits of this paper. I consider traction necessary in most fractures. This is true, whether the fracture is in the arm, forearm, thigh or leg. I consider open reduction seldom necessary but good position (need not be perfect), and accurate fixation is necessary. Most surgeons are prone to consider non-union as not present too soon and this is especially true of the surgeon who has the habit of open fixation of a large number of fractures. Certainly, non-union cannot be said to exist until six months has elapsed and in many cases one year, depending on the individual and the amount of tissue damage at the time of the injury. Interposition of soft tissue is too often an excuse and not a reason for intervention.

When one is forced to deal with a compound fracture, the result too often depends upon the management of the condition at the time of, or soon after, injury. One of the most important things is to not reduce the bone ends until they, the wound, and the the surrounding tissue have been thoroughly cleansed. Should the injury occur in surroundings where this cannot be done, completely saturate the wound with the best antiseptic available under the conditions present, cover with a sterile dressing saturated with the antiseptic, apply a bandage, then apply an emergency splint that will immobilize the part. Do not put on short or small inadequate splints. Immobilize the joint above and below the injury, in such a manner that the bones will not reduce themselves, and that severe damage will not occur to soft tissue.

In the hospital under aseptic conditions, thoroughly scrub the wound, the bone ends and the surrounding skin area with soap and water, using a sterile brush and sterile water to flush out the wound. This should be followed with a thorough cleansing with ether and alcohol; then I usually follow with metaphen or merthiolate. The wound should be enlarged to allow further cleansing in a puncture wound. Or if inadequate, the bone ends can then be reduced, the wound closed, without drainage and a plaster cast applied. There need be no fear of infection in most of these cases, provided they are gotten within the first six hours. In other words, an open infected wound is made into a clean, closed one. Should there be a drain insert-

ed you are almost certain to get infection. When the wounds are large and cannot be closed without tension, I pack them with vaseline gauze, apply a cast, and change the pack as seldom as possible. I seldom fasten the bone ends together with anything as this acts as a foreign body, causes tissue irritation and infection. In large, grossly infected wounds and where some type of internal fixation is necessary, I am of the opinion that wire is probably better than anything. Plates and screws probably the worst. Small strands of cat gut or sterile rubber bands make good drains for these wounds. Hot saline compresses, changed often and kept hot act better to control infection than any other procedure. Sulphanilamide is occasionally indicated and especially when a culture from the wound shows a streptococcus. The patient or some responsible member of the family should be taken in confidence. The X-ray should be shown to them, after preparing the way by explaining that absolute accuracy of alignment is rarely obtained and is not necessary. Conceal nothing, for if you do, a law suit may be your reward.

In considering the injury of joints, think first of fracture and think last of dislocation and you will be right eight out of ten times, the shoulder joint being the only exception. Injuries to the joints of the fingers are nearly always fractures through the cartilage. So-called dislocations of the hip are 99 per cent of the time proven finally to be fractures of the neck of the femur. Of all injuries to joints, those of the knee are probably the most important and the most commonly mistreated. These injuries far too often result in permanent disability of a high degree when proper treatment at the time of the injury would have entirely prevented the condition. The most important of these injuries, as well as the most disabling, are injuries to the cartilages. If the medical profession could be made to understand that fractures of the cartilages heal as fractures anywhere else, and that the same treatment is necessary for this healing as with any other fracture, this disability would be prevented; that is, fractures of the cartilages necessitate immobilization of the knee joint and rest. In any case of trauma to the knee joint, fracture of the cartilages should be suspected and should there be any doubt, stay on the safe side, immobilize the knee on a well padded posterior splint, put the patient to bed for two weeks, then allow the patient up on crutches with the knee splinted but remove the splint each day for

passive motion and massage. In making a diagnosis, the history of the injury, whether or not the knee was in a flexed position at the time of the injury, are very important considerations. Fingerpoint tenderness over the anterior attachments is most important. There will frequently be a noticeable swelling at the anterior attachment, whether or not motion of the joint has been interfered with and especially locking.

Rupture of the lateral ligaments and, especially the internal, must be considered and will almost always heal if the joint is immediately immobilized and kept immobilized for a sufficient time for union to take place.

I wish to consider briefly injury to the aged because the treatment is usually much different to that of the young or middle-aged individual. The element of mental and physical shock is a more important factor in these people. The mere placing of an aged person in a recumbent position may induce pulmonary stasis and death. Use measures to protect the respiratory, circulatory and urinary systems.

Because of the subject I have chosen, it has been necessary for me not to go into detail and I have necessarily had to leave out many types of injuries to keep this paper within normal time limits. I hope to have pointed out some simple facts and to encourage more attention to this subject. Traumatic surgery has lagged while other types of surgery have progressed.

Sulfanilamide in Respiratory Infections and Rheumatic Fever.—The experience of Coburn and Moore over the last ten years has shown that rheumatic subjects who escaped hemolytic streptococcus infections also escaped rheumatic fever. With this objective in mind they conducted studies in the prophylaxis of hemolytic streptococcus infections during the last two years. The data reported comprise experiments on guinea pigs and observations on eighty rheumatic subjects. The authors found that sulfanilamide administered to guinea pigs before or after the induction of streptococcic abscesses failed to sterilize the lesions. Sulfanilamide used prophylactically prevented spontaneous infections and either prevented or modified the development of induced hemolytic streptococcus cervical adenitis in guinea pigs. Sulfanilamide administered to rheumatic subjects after the onset of streptococcic infections of the throat did not prevent rheumatic recrudescences. The possible prophylactic use of sulfanilamide was tested in eighty rheumatic children. Seventy-nine escaped hemolytic streptococcus infection and signs of rheumatic activity.

ROCKY MOUNTAIN SPOTTED FEVER IN KENTUCKY, ONE CASE REPORT*

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Rocky Mountain spotted fever was first recognized in Kentucky in May, 1934, when a case was diagnosed in Jefferson County, near Middleton. Two additional cases of this disease were reported during that year—one from Jefferson County and one from nearby Trimble County. No cases were reported in 1935. Three cases were reported in 1936, one from Carroll County and two cases occurring in twin boys in Hart County. In 1937, one case was reported from Barren County and one in 1938 from Anderson County.

No satisfactory explanation has been found for the sudden appearance of the disease in the State in 1934. It has been suggested that infected ticks were brought into Kentucky on western cattle in 1934 when 60,000 of these animals were imported for pasturage because of a drought in the West. That these cattle were not responsible for the original introduction of the infection is clearly shown by an investigation which revealed that the three cases occurring in 1934 had their onsets in May, June and July, respectively; whereas, the first shipment of western cattle did not arrive in the State until August 12, 1934. The same investigation disclosed that these cattle were first delivered to stock yards at Louisville, Cincinnati and Evansville, and then distributed widely in counties in northeastern, southeastern, central and western Kentucky, whereas, cases of Rocky Mountain spotted fever have been reported only from counties south and east of Louisville, and within a 100 mile radius, of this city. It is felt that if these western cattle had introduced the infected ticks, cases would have been recognized in areas corresponding more nearly to those over which they were distributed.

To determine whether or not cattle from endemic areas in the West had been coming into the State to any extent, either before or after the large influx of 1934, an investigation was made through live stock brokers, who buy and sell cattle and other live stock in the State. The records of these live stock brokers revealed that practically no western cattle, with the exception of a very occasional shipment of relatively few animals from Texas, are sold into Kentucky. For the most part, cattle bought and sold by brokers in Kentucky come from southern Indiana, Tennessee, Alabama and Mississippi. In view

*Read before the Anderson County Medical Society.

of the fact that cases of Rocky Mountain spotted fever have been recorded in practically all of the eastern States, the conclusion is reasonable that the infection was probably introduced by normal traffic, not only in cattle, but in sheep, horses, dogs and other live stock as well.

Since 1934 a total of 8 cases of Rocky Mountain spotted fever have been reported in Kentucky. All of these cases came from rural homes; all were white. Six were males and two females. The ages of the patients ranged from 4 to 22 years, an average of 12 years. The onset of one case was in May, the onsets of four cases were in June, and three cases had their onsets in July. This corresponds with the season of greatest activity of the *Dermacentor variabilis*, the tick that transmits the disease in the eastern United States. Of the eight cases thus far recognized two have died, giving a fatality rate of 25 per cent. This is the fatality rate usually encountered in the eastern type of the disease.

The only case of Rocky Mountain spotted fever recorded in Kentucky in 1938 occurred in a citizen of Anderson County. This case is written up to add to the two other cases which have been so reported.

CASE REPORT

L. W., a native born white male, aged ten years, was first seen at his rural home on July 18, 1938. Prior to his present illness, the patient had always been in good health. Five days before the first visit of one of us, (T. J. S.) the patient became irritable, wanted to lie around at home and had a loss of appetite. The facts that this patient became worse and a rash appeared on the fifth day of the illness caused medical aid to be summoned. On examination, the physician found a discrete macular rash, disappearing with pressure, distributed over the entire body; a temperature of 103° F., pulse 90 and respiration slightly increased. There was only a slight suggestion of photophobia. The child was lethargic, but took nourishment when it was offered to him. A tentative diagnosis of measles was made on the visit. The patient was seen daily. The temperature varied between 102° F. and 103° F., the pulse around 90. He continued lethargic and suffered epistaxis at intervals. There was some delirium and, during his lucid intervals, the child complained of intense headaches and backaches; some deafness had developed.

On July 27th, fourteen days after onset, the temperature was still 103° F. The rash had taken on a dark red petechial appearance, was more prominent in the morning than afternoon, and would not disappear on pressure. On this date the diagnosis was

changed to typhoid fever, although the child had been immunized against this disease one year before. A blood specimen was taken on which agglutinations for typhoid, tularemia, undulant fever, and a Kahn test for syphilis were requested. All of these tests were negative except the Widal, in which case agglutination occurred in a dilution of 1-100. This was considered of doubtful clinical significance in view of the patient's recent immunization for typhoid; however, isolation precautions for typhoid fever were instituted. In view of the extensive rash, the agglutination of *B. typhosus* in low dilution and the recent immunization, the diagnosis of typhoid fever was not entirely satisfactory.

Having been apprised of the fact that cases of Rocky Mountain spotted fever had been appearing in the State over the last four years, it was decided that, because of the length of time from onset to the appearance of the rash, the type of the rash and the clinical course that the case had followed, this disease was a possibility in this case. Accordingly, a visit was made to the home on August 5th, when the patient was found much improved. The temperature, pulse, and respirations had returned to normal and the only remnants of the rash were faint brownish stains in the skin. While still in bed, the patient was alert and in full possession of all his faculties.

On thorough interrogation, it was learned that on July 8, 1938, five days before the onset of his symptoms, the patient had removed a tick from the hair on the back of his neck. This history was confirmed by a brother who was with him when he removed the tick. After obtaining this history, a second blood specimen was obtained and forwarded to the State Department of Health laboratory, with a request for a Weil-Felix reaction. The serum of this blood specimen was found to agglutinate *B. Proteus* XI9 in dilution up to 1-2500. Diligent search failed to reveal body lice on any members of the family.

CONCLUSION

1. Rocky Mountain spotted fever was first recognized in Kentucky in 1934. Investigation failed to show that the importation of western cattle in 1934 for pasturage, because of a drought in the West, introduced the disease.

2. A case of Rocky Mountain spotted fever observed in a rural home in Anderson County is reported. The diagnosis was established in this case beyond reasonable doubt by the history of a tick bite, the absence of body lice, the appearance of a rash five days after onset, the character of the rash and the agglutination of *B. Proteus* XI9 in dilutions up to 1-2500.

FUNCTIONAL CARDIAC DISORDERS*

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Louisville.

The subject at hand is very aptly called to our attention by a paragraph from an address by Thomas W. Salmon, a psychiatrist (1876-1927).

"The old, unproductive controversy over what is "mental" and what is "physical" in normal and abnormal functions is ending.

The discovery of regulating mechanisms chiefly in the central nervous system that enable whole systems of organs to act in harmony with other systems show us that the minute study of a single organ is inadequate to explain even all of its own functions, much less the part it plays in the life of the organism as a whole. Thus the way is rapidly being cleared for the concept of man as an organism acting, even in his most circumscribed mental or physical activities, as a whole."

Functional cardiac disorders is a broad subject, the late Harlow Brooks, an eminent internist of New York City, leaves us a complete text book on the subject; therefore in the few minutes allotted me I can only give you a brief review of our knowledge of this disorder and will close with a case report which we believe to be a typical example of disturbance in function of the heart without disease of that organ.

Possibly the best definition or classification for this form of heart disturbance is that patients having abnormal signs or symptoms of heart disease and yet with no structural disease of the heart are suffering from a functional cardiac disorder.

It is very important for both the layman and physician to recognize fully that many cardiac symptoms and signs, though of very striking and annoying character, are not in themselves or in their effect, dangerous to life.

We might separate the patients afflicted with functional heart disease into two groups.

1. Those having some abnormal physical findings in the heart.

2. Those with heart symptoms but without abnormal findings in the heart itself.

Any statistical study of functional disorders as opposed to organic heart disease seems to me rather futile since there are many people with functional disturbance who never consult a physician, perhaps being totally unaware of an occasional extra-systole,

and there is another large group who fall into the hands of charlatans; while practically every case of an organic character will eventually come to us.

The types of functional cardiac disorders in the relative order of occurrence are as follows:

1. Neurocirculatory asthenia.
2. Premature contractions or extra-systoles.
3. Paroxysmal tachycardia.
4. Auricular flutter or fibrillation.
5. Sino-auricular tachycardia.
6. Sino-auricular bradyecardia.

Not definitely falling into type; angina pectoris (functional), systolic murmurs, and pure cardiac neuroses.

By far the more common of the above-named types is the first and our time will only allow us to go into some detail about this one condition.

Neurocirculatory asthenia is a symptom-complex which in the past has been described under titles such as effort syndrome, athlete's heart, soldier's heart, tobacco heart and D. A. H. (disordered action of the heart). The first description of this condition in American literature was about the time of the Civil War when as a natural consequence of the examination of large numbers of recruits it was found that an entity which they called soldier's heart was frequent, then again with the World War much was written about effort syndrome, particularly by the English physicians. Only of late years has the more descriptive term of neurocirculatory asthenia come into common use.

As to age, it is seen mostly in young adults; in a series of 365 cases reported by Paul White more than 50 per cent were between twenty and forty years of age.

Females are probably affected more often than males, in White's series 60 per cent females; in earlier years it was suspected to be a disease rather confined to males, this conclusion is understood since it was then discovered during examination of men entering army service but since full recognition of the symptom-complex and application of our knowledge to general practice it is found probably oftener in the female.

Heredity is a very important and most fundamental etiological factor, it is often found that other members of the family have a sub-normal nervous makeup, they may have suffered from nervous breakdowns, fainting spells, epilepsy, etc.

Strain is next in importance to heredity as an etiological factor. This may be mani-

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rested in various ways as worry over business or family troubles, financial difficulties, emotional conflicts, nervous fatigue and after illnesses producing a nervous and physical exhaustion.

Many patients present clear evidence of constitutional inferiority.

Symptoms presented by individuals suffering with neurocirculatory asthenia should be most carefully weighed, it must be remembered when the patient is reciting his history that he may have been reading various books on heart disease and gleaning much of the so-called valuable advice from the daily press, so in many instances we may hear the story of what they think they have rather than true symptoms.

Breathlessness usually brought on by exertion is probably a leading symptom and we use the term advisedly, breathlessness is not true dyspnoea. Sighing, fainting spells, pain in left chest usually around the apex of the heart, dull and aching in character and not radiating, occasionally stabbing pain in chest. In organic heart disease there is rarely any sighing; dyspnoea rather than breathlessness and pain is sub-sternal rather than apical, of a squeezing or boring character instead of dull and aching; also radiation of pain is the rule in organic disease.

On examination, the person is usually of the asthenic type; thin, under-sized, presenting a long and narrow or flat chest. Coldness of hands and feet and free sweating are common. The heart presents a diffuse and forcible impulse, systolic murmurs frequently heard and usually over the base rather than apex (just here it may be mentioned that a diastolic murmur seldom if ever should be interpreted as functional). The rate of the heart is very unstable, by this we mean it will vary quickly from slow to fast and even after exercise it may be found slower than it was a few minutes before when the patient was lying down and apparently at rest. Irregular rhythm is not usually present in neurocirculatory asthenia.

Electrocardiographic and fluoroscopic examination are valuable in this as well as other functional heart disorders due to the fact that they give us normal findings, often the X-ray shows a "small standing" or pendulous type of heart.

The blood pressure in these cases is also unstable, the systolic level will vary, especially under emotional stimuli; however I would give out the warning that if you find a diastolic level which is fixed above 90 to 100 it is very likely that you have some organic disease.

Differential diagnosis excludes heart disease on the basis of negative findings. Hyperthyroidism and tuberculosis must be excluded by the appropriate examination.

Treatment consists first of a careful and complete study of the case, this is followed by careful and detailed explanation and reassurance. I do not believe we should speak too bluntly and quickly and dismiss the patient with a statement that there is nothing organically wrong with him. Reassurance wins half the battle. Drugs are of little value and when given it should be carefully explained that they "are not for the heart."

Smoking interferes with recovery and should be eliminated or greatly restricted. Infectious foci when found should be removed. Psychogenic factors should be sought and handled, in some cases this can be best done by the original physician, in others by a psychiatrist. Bed-rest is not advisable, it is better that we prescribe graduated exercise.

In estimating the prognosis I cite you the figures of Grant, in a series of 600 cases of neurocirculatory asthenia followed for a period of five years. 15.3 per cent recovered entirely; 17.8 per cent improved; 56.2 per cent remained stationary and 3.2 per cent became worse.

There appears to be no tendency for these cases to die prematurely or to develop organic heart disease, however many live partially crippled lives.

As to the various arrhythmias outlined earlier in the paper, we will only say this: it is possible to have any type of irregularity without organic heart disease but certain heart disorders as heart block, congestive failure and pulsus alternans rarely if ever occur without evidence of serious heart disease.

Now I would like to report briefly one case of a functional heart disorder. I have chosen this case because I have had the opportunity to follow it for more than seven years, the patient is intelligent and cooperative and he presents a profound disturbance.

CASE REPORT

Male, 53 years of age, a physician; consulted me on March 6, 1931, complaining of nervousness, heart palpitation, feeling faint. One month ago at his office was suddenly surprised and frightened; immediately felt very weak, perspired freely, heart started to race and felt as if it were totally irregular. Has had four to six similar attacks in the past month lasting from twenty minutes to

ten hours. No dyspnoea or oedema. No pain in the chest.

The past history revealed no serious illness of consequence.

The family history shows one interesting fact which I did not obtain until two to three months later when I was discussing with the patient the possibility of giving an opiate during a severe attack. He then told me that he had an extreme fear of this, had only had one hypodermic years ago for a broken arm and tells me his father, mother and a brother were morphine addicts.

On examination we found an under-nourished, flat-chested man, weighing 112 pounds; appears somewhat older than his actual age and is most apprehensive. The heart exhibits a diffuse apical impulse, the rhythm is totally irregular and the rate from 100-120. A systolic murmur heard all over the precordium, most intense over the base. The blood pressure was 126-70.

Fluoroscopically the heart was normal in size and contour, tendency to the pendulous type. The aorta was not remarkable.

Laboratory work revealed a negative urine, negative blood Wassermann, blood count showed rather small number of white cells (3,800) with normal differential; the laboratory stated this probably indicated lack of resistance.

Basal metabolism was within normal limits.

This individual was seen by another local cardiologist shortly after his original attack and was told no pathology was found and the electrocardiogram was normal. A month or so after consulting me he went to Cincinnati and was examined there by an internist with negative findings except for fibrillation.

The subsequent history shows that about two to three months after the inception of his illness the heart went into constant fibrillation which continued for eighteen months. During that time on my advice and with approval of others who had seen him we tried Digitalis and Quinidine on several occasions with no good results. In retrospect I should now say this was poor therapy, as the patient tells me he feels much better without any drug unless he may take an occasional mild sedative.

Since the attack of eighteen months duration which one day stopped for no reason at all, he has continued over the years to have paroxysms of fibrillation every three weeks to two months which he states come on almost invariably at one to two o'clock in the afternoon and last almost exactly five

hours by the clock. They do not interfere with his work except that he feels a little let-down during the attack.

He is now 60 years of age, 25 pounds heavier than in 1931, and continues an active and busy practice.

Summary:

1. Functional cardiac disorders are commonly encountered.

2. Neurocirculatory asthenia is the most common form and has been dealt with in some detail.

3. Both the layman and physician must recognize the fact that many cardiac signs and symptoms, though of very striking and annoying character, are not in themselves or in their effect, dangerous to life.

4. Breathlessness, pain in the "heart," sighing, fainting attacks are leading symptoms in functional heart disease.

5. Systolic murmurs do not necessarily mean organic heart disease.

6. It is possible to have any type of irregularity without organic heart disease but certain heart disorders as congestive failure, heart block, and pulsus alternans rarely, if ever, occur without evidence of serious organic disease of the heart.

7. Auricular fibrillation, which usually is associated with organic heart disease, can be at times a purely functional disorder and such a case is reported.

DISCUSSION

Emmet F. Horine: Primarily we must understand that various functional disturbances of the heart may occur without organic disease being present. These cases are not especially difficult to diagnose. When a functional disturbance accompanies organic disease, differential diagnosis may become difficult unless one makes a most careful and thorough examination after obtaining a full history.

A very important point to remember is that the more vehemently the patient complains of the heart symptoms the more likely will the condition be functional. Often serious heart involvement may be present without there being any heart symptoms. In these cases the patient may merely complain of shortness of breath, digestive disturbance, or even pain in the lower chest or upper abdomen. If the patient is not properly guided by a family physician, he may first consult a surgeon, or a gastro-internist, or even a laryngoscopist.

It is interesting that of the patients coming to me or being sent because of heart symptoms, roughly only 60 per cent have organic heart disease, while the other 40 per cent either have functional disorders or no cardiac involvement whatever.

Certain rules will help materially in differentiating between organic and functional disorders of the heart. Organic heart disease in normal individuals should not be diagnosed unless one or more of the following findings are present: (1) Cardiac hypertrophy; (2) Alteration of the contour of the heart as observed by the X-ray; (3) Aneurysmal dilatation of the aorta; (4) A purring thrill at the apex or base; (5) Hypertension, either systolic or diastolic.

In older individuals, however, it is important to remember that none of the above signs may be present, and yet, widespread coronary and myocardial changes may be shown by electrocardiographic examination. Also, it is very important to remember that a frank history of an anginal syndrome may permit of a diagnosis of an angina pectoris even when no physical signs are present and even with normal electrocardiograms.

I agree with the essayist that all types of cardiac irregularities may be present in the absence of organic disease. Even auricular fibrillation may occur in normal individuals under certain circumstances in these cases when rhythm may be practically always restored by using quinidin sulphate. I may add that this is a marvelously effective drug when properly used even in the presence of organic disease. Time will not permit of the indications and contraindications.

In functional disorders, digitalis is too often used. Please remember that there are two indications only for digitalis: the one is auricular fibrillation with a rapid ventricular rate, and the other is congestive heart failure. My reasons for urging that digitalis not be used without adequate indications are that I have seen so many patients who had been made invalids partly because of loss of appetite and nausea, or even because of heart consciousness sometimes produced by the digitalis itself.

Most patients with functional heart disorders can be restored to normalcy. The treatment resolves itself primarily into psychological handling of the situation. Primarily we must obtain the confidence of the patient and then demonstrate that no real heart disease exists. After this a graduated system of exercise will further restore the patient's confidence. Sometimes, in addition, it is necessary to employ sedatives or to use quinidin in order to abolish disturbing premature contractions.

Just a word with reference to auricular fibrillation which most often is encountered with certain types of organic heart disease. However, auricular fibrillation may be present in the absence of any type of heart disease. Sometimes the paroxysm of auricular fibrillation arises as the result of mental stress or severe physical strain. Even fright has initiated the

onset of attacks in normal individuals. I have had the opportunity to follow a number of patients of this type whose first and possibly only bout of auricular fibrillation occurred as long ago as sixteen years. Since then these patients have lived normal lives.

The most difficult type of case, as originally indicated, is the one with organic heart disease complicated by a functional disturbance. Careful differential diagnosis will permit of proper treatment with relief of the functional phase of the situation. Thus the patient is able to lead a normal or sub-normal existence depending on the degree of severity of the original organic condition.

Morris Weiss, Louisville: The title of this paper "Functional Heart Disease" is, in a sense, an innocent one. However, the discomfort which functional heart disease may produce can be so disabling that it warrants our serious consideration. I am sure there are few of us who have not thought about his heart, who have not experienced palpitation or possibly some irregularity. When the layman becomes heart conscious, you can well appreciate the mental state it produces. The mental state in turn aggravates the heart consciousness. Soon we have a vicious circle which is at times extremely difficult to break and as the essayist has commented, over 50 per cent do not seem to be cured. I think that is a pessimistic figure because the majority of the patients in my experience, after confidence is restored, while they may slip occasionally throughout their lives are restored to economic equilibrium. They lose little time from work and in that sense are cured.

We must not be too hurried in making a diagnosis of functional heart disease. If no organic heart disease is found we are prone to say that the patient has functional heart disease. It is important to remember that coronary sclerosis in particular may not give any physical or laboratory signs, and we must be very careful to keep it in mind in excluding organic heart disease. This particularly applies to cardiac pain or angina pectoris. Thirty or forty per cent of the patients with angina pectoris have normal findings with a normal electrocardiogram and X-ray of the heart.

Another type of organic heart disease which is being more appreciated and which presents no organic signs on examination is traumatic heart disease. Blows or injuries over the precordium may bruise the heart without necessarily producing serious external signs of injury, such as a fractured rib. At the time the patient may merely present a disturbed action of the heart, but days and weeks later serious signs of heart failure may become manifest.

We must keep in mind that the exclusion of

organic signs does not necessarily mean that the patient does not have some latent trouble, particularly coronary sclerosis.

One of the most intriguing aspects of functional heart disease is its medico legal problems. An individual lifts a heavy timber or undergoes some severe strain in the course of his work and complains of his heart a day or a week later. Examination reveals no organic heart disease. A diagnosis of effort syndrome or neurocirculatory asthenia is warranted. Yet that individual is disabled, he is a cardiac cripple in a sense. Weeks and months may be required before we can restore him to economic stability, but the Workmen's Compensation Act provides no provision for such individuals. When they apply for compensation and are turned down they develop more heart symptoms, disorders of other organs appear, and years may go by before they realize that they will never receive compensation; in the meantime they are not working because if they do go back to work they know they will not get paid, and a vicious circle is rapidly established. I believe if we could arrange the Workmen's Compensation Act in such a fashion as to pay these people a reasonable amount of compensation, they would be restored to work quicker than they are now.

The question of the diagnosis of functional heart disease, particularly that due to benign arrhythmias, is at times very difficult. Of course if you see the patient in a paroxysm of auricular fibrillation or in a tachycardia or with premature contractions, the diagnosis is relatively easy, but unfortunately the paroxysms of tachycardias may have disappeared by the time the patient consults a physician and he comes only with a history. It may be difficult for him fully to describe his complaints. If he mentions his disturbed cerebral symptoms which often dominate the clinical picture, the clinical diagnosis may be dismissed as obscure and the patient sent away saying there isn't anything wrong.

E. B. Willingham, Paducah: Mr. President and Fellow Members: I cannot add anything of importance to this discussion. I was forcibly struck by the last gentleman's comment, especially in regard to injuries. I have happened to have several of those conditions, and I will say they are very hard to get before a jury or court in a way that can be of any benefit to the plaintiff. The fact that we are inclined to place many cardiac conditions as functional is rather bad because it isn't every time, as the previous speaker said, that we can eliminate an organic trouble, a disease, just by physical examination, even including electrocardiogram. There are many things that will even produce organic troubles, and they come on so insidiously that we surely should not be too optimis-

tic when we tell a patient he has no organic disease.

It is rather impressive to the patient if a cardiogram is shown and explained along with a good sensible talk, and often that will be a good line of treatment. If you can show him something tangible he is more inclined to believe your advice and to take it seriously, and sometimes the patient can be really benefitted a good deal just by showing him something that looks good to him, and especially if he has confidence in his physician he will accept his advice much more readily.

Woodford B. Troutman, (In closing): I appreciate the discussion of Drs. Horine, Weiss, and Willingham. I want to agree (and I think we are in agreement on that subject) that the psychological element is the big factor, of course; in functional heart disease any treatment resolves itself 80 per cent anyhow into using psychological methods toward helping the patient out.

I sometimes wonder which is the greatest error, to make the diagnosis of functional heart disease where there is organic disease present, or, conversely, to make the diagnosis of organic disease when there is functional trouble only. I think when we make a diagnosis of organic disease where there is only a functional disturbance present we have the patient himself to contend with, he is going to prey on us; if we make a diagnosis of functional heart disease and it is found then that there is an organic disease present, as Dr. Weiss stated, we see some morning that the patient has died and then we have the family after us.

I do believe that the way to arrive at a diagnosis in cases of functional heart disease is not to be too cocksure and too quick in the diagnosis, but to make a thorough, complete examination, and don't give the patient an answer on the first visit; have them come back to you and the thing will tend to work itself out in time. Unfortunately, with all of our modern methods of diagnosis, as was stated by one of the discussants, sometimes we can have an entirely normal picture so far as the electrocardiograph and orthodiagram and so on go, and yet that patient may have a most profound organic disturbance and die very suddenly.

I again wish to thank the discussers and to thank you for your attention.

Nathan Straus, Administrator of the Federal Housing Authority, told the United States Chamber of Commerce: "Whether we like to face it or not the fact remains that the United States is the most backward country in the civilized world in providing decent housing for our people. We have piled up an appalling number of slums. One-third of the nation," he said, "exists in misery and filth."

LOBAR PNEUMONIA*

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The present program for the prevention and cure of lobar pneumonia is the result of fifty years of continuous study of bacteriology, immunology, and pathologic physiology of the disease. Those efforts which have contributed most to this progress have been characterized by orderly thought and adequate controls. The high points have been the demonstration of the pneumococcus as the principal cause, the determination of the several types of pneumococcus, the demonstration of the facts of pneumococcal immunity, the advances in serum therapy, and the improvements of methods of application of oxygen.

It is possible here to refer only briefly to these procedures, and then to comment on a few of the problems that arise in the routine care of persons suffering from respiratory disease.

For years after the demonstration of the pneumococcus as the cause of croupous or lobar pneumonia, there remained many obscure and confusing anomalies in etiology and epidemiology. Examination of cultures from throats of healthy persons as well as of the sick frequently showed pneumococci, and yet there were many instances in which there was unquestionable evidence of the contagiousness of the disease. Early attempts at treatment by antipneumococcus serum yielded inconstant results, and this form of treatment was virtually abandoned as clinically ineffective.

It was then found that strains of pneumococci differ among themselves in their immunologic and cultural reactions. Three so-called fixed types were identified and those that did not conform to any one of these three were placed in Group IV. Epidemiologic studies based on this division of pneumococci into four types became more intelligible. An antiserum was developed for Type I, and later for Type II. Subsequent studies have resulted in the further division of pneumococci into types until there are now recognized some 30 types. Satisfactory antisera are now available for several of these types—I, II, V, VII, and VIII, and sera for the higher and less frequent types will undoubtedly follow.

From a practical standpoint, all this multiplication of types and sera, seems at first

glance to complicate rather than simplify the treatment of pneumonia. However, in the last years, laboratory diagnostic procedures have kept pace with clinical requirements, so that any well-equipped laboratory is able to examine a specimen of sputum from pneumonia, and often in a few minutes report as to which of the thirty pneumococcal types is present, and whether an effective serum is available. A survey last year showed that there were 1,757 hospital laboratories in this country which were equipped to type pneumococci. The number of laboratories now equipped for this work is greatly increased over that of a year ago. From personal experiences I have been much impressed by the quality of work done by practitioners in smaller communities, and with the rapidity with which physicians have taken up the use of anti-pneumococcic serum, once they could be assured of its effectiveness in a reasonable proportion of cases.

These advances in knowledge of pneumococci and lobar pneumonia, and in the manufacture of anti-serum appropriate for certain types, have changed greatly the emphasis on the several procedures in the care of pneumonia. Pneumonia is no longer just pneumonia, the outcome of which will be determined by the physical stamina of the patient and his resistance to the infection. Two typical cases clinically indistinguishable may be due to different types of pneumococci and thus require different sera. The exact facts may be determined quickly, and if serum appropriate for the type is available, the patient will have the advantage of early treatment, and his chances of recovery will be greatly increased.

It is well to remember, however, that no method of treatment can guarantee 100 per cent cures. Nevertheless, treatment that will reduce the case fatality rate from 25 per cent to say 10 per cent for a given type is well worth the effort.

TYPING AND ANTI-SERA

Methods of typing of pneumococci have been improved in simplicity and rapidity. The earlier mouse method which required a minimum of a few hours, was replaced by the slide agglutination method of Sabin, and this in turn by the Neufeld method by which the type of pneumococcus in sputum can be ascertained in a few minutes. The Neufeld method depends on the swelling of the capsule of the pneumococcus when it is exposed to the homologous antiserum.

Antisera derived from the horse have been refined and concentrated with the removal of

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reaction-producing substances, so that these sera can now be administered in large doses with a minimum of reaction except in those patients who are sensitive to horse serum. Refined immune rabbit serum is also available, and in several reported studies has given excellent results.

Before serum is administered, the possibility of serum sensitiveness must be explored by history, and by intracutaneous and conjunctival tests. A positive ophthalmic test is a contraindication to the use of serum, but a positive intracutaneous test is regarded only as a warning of possible allergic reaction (Plummer). Following these tests 1-10 cc. of the therapeutic serum is given intravenously and in the absence of reaction after one to two hours a further dose of 1 cc. to 5 cc. is given, followed in one to two hours by the full dose of serum, or as much of it as can be given without reaction. Epinephrine solution 1-1000 should be kept prepared in a syringe throughout the treatment.

The technique and results of treatment of lobar pneumonia of the several types have been described recently by Plummer, (using sera derived from horses) and by Loughlin, Bennett, and Spitz, using rabbit serum.

The great majority of pneumonias of lobar distribution are caused by the pneumococcus and for purposes of therapy it is wise to regard all cases as potential pneumococic pneumonia, and proceed promptly with examination of sputum for type. In the event that the illness is not due to a pneumococcus for which an antiserum is available, nothing has been lost.

Pneumococcus serum, from the horse, is dispensed in vials of 20 cc., each containing 25,000 units. For the average uncomplicated case treated within the first three days 100,000 to 200,000 units is regarded as sufficient. Bacteremia, extensive lung involvement, or delay in treatment, call for larger doses up to 250,000 or more units.

As soon as the type is determined, if homologous serum is available and not contraindicated by history and sensitivity tests, the first dose of 1 cc. of serum diluted with 5 cc. to 10 cc. of sterile salt solution is given intravenously. The second dose, 39 cc., (remainder of first vial and a second vial) is given in one-half hour, and 40 cc. (2 vials) more in from four to six hours. The best guide to further dosage is the clinical effect. Other tests are the demonstration of agglutinins in the blood for the homologous pneumococci, and the Francis test for antibodies, in which their presence is shown by the formation of an urticarial wheal with surround-

ing erythema at the site of intracutaneous injection of a 1-10,000 dilution of the specific pneumococcus polysaccharide.

The effects of serum therapy in favorable cases are a rapid decrease in toxemia, a reduction in fever in the ensuing hours after treatment, and the control of bacteremia. The prompt administration of serum is extremely important, especially in those patients with bacteremia, for it is in this group that the highest mortality is found. In the early series of case reports, as well as in the more recent studies, the most striking results were in those patients who received serum in the first three days of illness. Improvement in sera and in methods of administration now warrant the hope of improvement even in patients who receive the appropriate serum after the third day.

The effectiveness of antipneumococcus serum has been most clearly demonstrated in Type I infections in which the mortality has been reduced by fifty per cent. or in some series, somewhat more. This reduction in deaths holds also when the patients are classified by age groups. The effectiveness of serum in Type II is not quite as striking. Sera for several of the higher types have been made, and favorable results reported.

The cost of pneumococcus serum is often a serious item of family and of hospital expense. But as Bullowa points out, there is no hesitation about the cost of the operating room in appendicitis. It is also to be noted that in addition to the reduction of mortality the use of homologous serum, when available, shortens the period of serious illness, reduces the total period of hospitalization with resultant saving in special nursing care, and in the cost of oxygen and other supplies. In communities in which special funds are available, serum is supplied to physicians and hospitals. As the preparation of serum is further improved, and its use becomes more general, manufacturing costs will no doubt be reduced.

OXYGEN THERAPY

Many patients, especially those who have received a type-homologous serum early, pass through their illnesses without extreme respiratory embarrassment. Others suffer from painfully rapid respirations and dyspnoea, and cyanosis appears early. For these, the supplying of oxygen may give relief, and often is life saving. One of the principal recognized causes of cyanosis is rapid, shallow breathing, which prevents effective oxygenation, with resultant anoxemia. Heart muscle suffers in common with other tissues

of the body, but the effect on the heart is frequently secondary and is alleviated by increasing the oxygen supply. The most effective and readily available methods of giving oxygen are by the oxygen tent, or if this cannot be secured, the nasal catheter. Patients who at the outset object to the tent will usually, after a few hours' experience, protest against its removal. Respirations become slower, cyanosis is relieved, the pulse is slowed, and delirium is less.

OTHER REMEDIES

Another result of the development of rational and effective serum therapy for certain types of pneumococcal infection has been further to decrease emphasis on the use of drugs. This does not mean, however, that drugs are no longer useful in lobar pneumonia. While there are some patients who require little further than good nursing care throughout their illness, others present symptoms which are benefited by appropriate remedies. General malaise and aching in back and extremities, common at the onset of many acute infections, are often relieved by preparations of the salicylates. Pain and sleeplessness are ameliorated by codeine and cautiously by morphine, if necessary, during the early days of the pneumonia. Dyspnoea, and cyanosis call for oxygen. Digitalis, much less employed now than formerly, is of definite value in patients with pre-existing heart disease, or in those in whom irregularity, or passive congestion, give warning of failing heart. An adequate supply of fluids and the control of abdominal distention are important.

In pneumonias for which no homologous antiserum can be obtained, sulfanilamide, or its derivatives, can be used. The experimental work of Osgood raises the question of the use of sulfanilamide in patients in whom serum is also being employed. This question requires further study.

EARLY DIAGNOSIS

Typical lobar pneumonia with sudden onset, chill, pain in the side, rusty sputum, rapid respiration and physical signs of advancing consolidation is perhaps the most easily diagnosed acute infectious disease. But in other patients, in the early hours of the illness, the diagnosis may be by no means clear. There may be no physical signs in the chest, and all that can be said is that the patient who has had a previous cold, or who even may have been in perfect health, now has fever, and feels and looks ill. Previous slight cough may be accentuated. It is unnecessary to attempt the further re-

hearsal of the relatively slight symptoms which sometimes usher in what proves to be a severe lobar pneumonia. Looking back after three or four days of illness, the significance of these symptoms is clinically much clearer than at the outset. Perhaps the most suggestive feature is the sudden change from relative health to that of serious illness with fever. The possibility of pneumonia always must be considered.

The time of appearance of physical signs in the lungs varies. On the first day a few fine rales with perhaps suppressed breath sounds may be all that can be made out. Physical signs of consolidation are often evident, by the second, sometimes not until the third day, or in exceptional cases still later. The portable X-ray unit is of great assistance in diagnosis, and in following the course of the consolidation.

OTHER RESPIRATORY DISEASES

Other conditions especially in hospitalized patients, may simulate pneumonia. Respiratory complications, following operations, such as pulmonary embolism and infarction with sudden pain and subsequent blood-stained expectoration and fever, and more rarely, atelectasis and massive collapse, raise questions of differential diagnosis from lobar pneumonia. A study of routine necropsies recently showed that of all cases of lobar pneumonia, post-operative lobar pneumonia was rare, and that post-operative pulmonary complications are usually due to other forms of pulmonary disease. Some 20 per cent of pulmonary disease in patients, in a general hospital, dying from all causes, were due to broncho pneumonia from the aspiration into the bronchi of eructated stomach contents.

During the past spring and summer there have occurred a number of cases of acute respiratory disease, with high fever, rapid respirations, and physical signs of consolidation. While most of these were broncho-pneumonias, some presented clear evidence of lobar distribution of the lesions. Repeated examinations of sputum showed no pneumococci. The predominant organism was a non-hemolytic streptococcus. The sputum was muco-purulent with no increase in fibrin, usually not blood-stained.

PNEUMONIA PROGRAM

Effective antisera for some types of pneumococcal pneumonia has introduced a new note in the diagnosis and treatment of the disease. It calls for greater care in diagnosis, cooperation with laboratories, and above all, care to avoid accidents in the ad-

mini-tration of serum. The patient with lobar pneumonia now constitutes a major emergency, and requires the major attention of the physician, so that he may receive the maximum benefit possible from present knowledge of the disease. The dissemination of this knowledge is facilitated by local pneumonia programs of state and city health departments.

A local pneumonia program should be informative and helpful. As indicated by the committee appointed by the Surgeon General: "Programs to be successful must enlist the active interest and cooperation of physicians, nurses, laboratory and public health workers. The central purpose is to support and assist the practicing physician and make generally available to him facilities for the bacteriological diagnosis of the disease and specific serum for its treatment." On the other hand, a local program which essays to tell the doctor what he *must* do is likely to fail in its objective, just as any attempt to regiment medicine, under the guise of securing better service by methods which surely will reduce the quality of medical care rather than improve it, is bound to fail.

DISCUSSION

V. E. Simpson, Louisville: Of the many interesting, as well as perplexing problems associated with the academic study of or the clinical contact with pneumonia discussed by Dr. Irons, time permits the further elucidation of but a few.

The use of a specific immune serum in the treatment of pneumonia has a recognized factual justification. A study of the natural infection in man, together with immunological study of artificial infection in animals, has supplied a background that permits of some certainty in predicting the effects of serum in some of the pneumonias and to appreciate some of the obvious limitations.

In man, ill but convalescing, antibodies are found which have been produced as a result of a pneumococcic infection. Agglutination in human blood was described, though meagerly, by Metchnikoff in 1891. Only two years later Issakeff vaccinated rabbits and confirmed the observations of Metchnikoff. Thus was born the two fundamentals of modern specific serum therapy.

This data, however, did not sustain the inference that all pneumonias elaborate agglutinins nor of lifelong existence of these antibodies if formed. Neufeld began his observations in 1901, followed by many papers since and confirmed by a host of observers, beginning with Huber in 1902. It was in Neufeld's first paper that he described the "quelling" effect of homolo-

gous serum on pneumococci. Collins began in 1905 to do work which has resulted in the separation of the pneumococcus group into the present classification into 32 types.

Some of the early serums were found to not contain any agglutinins and others, which did contain some, to be of such low potency that they were of little or no curative value. Chickering in 1914 found that the larger percentage of these antibodies was due to Types I, II and IV. An equally interesting observation was that these antibodies appeared at about the time the crisis occurred and that the duration of these in the blood varied.

In 1918 Blake made the observation that in pneumococemia the germs disappeared with the appearance of antibodies. He added an important observation when he found that patients recovered who developed an excess of antibodies over antigen, while those died who showed a progressive increase of antigen with no demonstrable antibodies.

In the years between 1909 and 1912 Neufeld learned that agglutination of pneumococci corresponded to susceptibility to the protective action of serum. It was this knowledge that led Cole in 1917 to use the agglutination curve of pneumonia patients' blood to explain variations in the curative action of serum. Dochez and Gillespie in 1913 separated the strains of pneumococci into four groups by means of mouse protection and agglutination. In 1914 Hanes found that by decapsulating the organisms called streptococcus mucosus in type III that agglutination with homologous type III serum could be produced, and suggested changing the name to pneumococcus mucosus.

On the basis of agglutinability Olmstead (1916), Griffith (1921) and Cooper (1929) have severally extended the serological classification of pneumococci to thirty-two separate and special types of the present.

Why does swelling of the capsule occur in specific typing or on what does Neufeld's Quelling depend? Goodner (1930) found that agglutinins are associated with the least soluble globulins of antipneumococcus serum. Jones and Little (1933) added that during specific agglutination the globulin from an immune serum is deposited on the surface of the organism. The interaction between the cellular carbohydrate and the immune globulin results in swelling.

Following the observations of Avery and Goebel (1933) that Type I acetyl polysaccharide in purified form absorbed agglutinins, precipitins and other protective bodies from Type I anti-pneumococcic serum, Francis (1934) concluded the reactive substance of the pneumococcal cell in type-specific agglutination is the capsular polysaccharid.

Of the complement fixation method for sero-

logical diagnosis of pneumococcal types it may be said briefly that it is definitely inferior to agglutination. The role of phagocytosis in the vital forces combatting pneumococcal invasion has been subject to intensive study since it was first suggested by Gamaleia in 1888. Kruse (1891) confirmed the observations of Gamaleia but believed it was of secondary importance to the bactericidal action of the serum. Mennes (1897) concluded that immunity in experimental animals to pneumococci developed from changes in the blood serum, but that this change did activate phagocytosis. In 1905 Neufeld set up the theory that immune serum did not stimulate the leucocytes but rather altered the germ, and thus the term "bacteriotrophic" was born.

Notwithstanding the intense interest in recent years in pneumococcal and specific therapy, there are many possibilities unexplored and problems unsolved. One question yet unanswered is, are the symptoms incident to pneumonia caused by a soluble toxin? By analogy one may conclude the pneumococcal cell produces such a substance. That it has eluded detection does not negate its existence in minute amounts too small for measurement or that it may exist in a nascent state. It must be conceded that the conditions obtaining in an animal or a patient have not been reproduced in laboratory media. A toxin may not be elaborated by pneumococci in an artificial substrate, yet may well occur as a product of bacteria and human cell interaction.

The immunological response of animals to pneumococcal antigens given by different routes is confusing to both clinician and laboratory student. Why does antigen injected in the skin produce antibodies in the serum that are species-specific but not type-specific? Why does the same antigen introduced into the animal's vein form antibodies that are type-specific homologous with the antigen type used? Has the nature of tissue reaction in either case been discovered?

It was early recognized that determination of the antibody content of treatment serum was important and tests have been set up to help standardize antipneumococcal serum. These efforts have not given results that are highly satisfactory. Important as standardization is for treatment serum, it is equally important for the physician to have some reasonably simple and efficient method of testing the effects of a specific serum in his patient. Such test would enable him also to determine if antibody formation is going on satisfactorily by natural processes; should the patient succeed in making a satisfactory amount, serum is unnecessary.

Another confusing factor in the treatment of pneumonia is the introduction of a "heterophile antibody." This substance is the hemolysin for sheep's blood. It is a mixture of horse serum

(80 per cent) and rabbit serum (20 per cent.) It is claimed for this antibody that it is useful in types I, II, III and IV, and yet it is found in blood of patients who died, those recovering and in normal control as well. Neither may one forget that sensitivity may exist for either or both serums. Finally, it has not been proved that a substance which will dissolve the corpuscles of sheep's blood assists the action of type-specific pneumococcal antibodies.

The multiplicity of types has made specific treatment difficult. Pneumonia due to type I presents symptoms and signs long recognized by the physician. Its serum has a high titer and its use has been satisfactory. The other types present individual problems. Type II was a group in reality until Cooper separated V and VI from it. As it now stands, perhaps a pure type, it causes some 10 per cent of pneumonias in adults. It is rarely found in children and most frequently in pneumonia's occurring between 20 and 50. It may be ushered in with a chill and there is much prostration. The signs develop slowly, resembling broncho-pneumonia for 36 to 48 hours. The sputum is mucoid in nature and there may be clots, raising the suspicion of a pulmonary hemorrhage. Its death rate is higher than either types V or VI and bacteremia incidence is high; the rate ranges as high as 40 per cent or even more. Bacteremia may develop as early as the 4th day. The serum for this type should be given in at least two times the usual dosage for several of the other types. With rabbit serum and the simplification of the type, the outlook for a satisfactory serum is better, even encouraging.

The old type III has also been found to be a group. Type VIII has been isolated from it. The type III pneumococcus has the largest capsule; the colonies are mucoid, larger than other types and no greenish halo is seen when grown on blood agar. It is often found as a saprophyte on nose and throat mucosa. Pneumonia from this type is often a mild disease, terminating spontaneously in 2 to 3 days, but usually there is marked prostration. Lobe after lobe may be involved in succession. The sputum contains bright red blood and often clots. It may involve the meninges either by way of the blood stream or from a mastoid infection. Bacteremia occurs in more than 25 per cent and causes delirium and a rapidly fatal pulmonary edema. Specific serum protects against bacteremia, but after it develops no lives have been saved by the serum. Rabbit serum is more potent than horse serum and may be labeled as hopeful. The mortality of type III is over 40 per cent.

Type IV, isolated from the old Group IV, ranks seventh in frequency in adults and sixth in children. The pneumonia from this type resembles type I. Bacteremia is common and results in a high mortality rate.

Type V, derived from the old type II, is the only pneumococcus that is hemolytic and often grows in chains. This type of pneumonia begins at the hilum, pleurisy is rare and the radiopacities are thin, while the sputum is bloody. Bacteremia occurs in 25 per cent. Agglutinins begin to form by the 4th day and reach a maximum by the 8th day. It is a frequent cause of pneumonia in children. Serum is helpful, appearing to prevent bacteremia.

Type VI is a frequent cause of sinusitis and may cause empyema. It is a common cause of pneumonia in children. The X-ray appearance of a type VI lung resembles broncho-pneumonia and is almost characteristic of this type. Serum is being used with fair results.

Type VII causes about 7 per cent of adult pneumonia and is more frequent in males. Its clinical picture resembles types I and IV. Pleurisy, like type I, is frequent (70 per cent) and empyema is common. Bacteremia occurs in about 12 per cent, but the death rate is high (17 per cent). It is a frequent cause of pneumonia in children. Serum is well worthwhile in this type.

Type VIII ranks about 4th in incidence in adults but is less frequent in children. Bloody sputum is common. It often follows a "cold". Prostration is not marked nor are the signs; pleurisy occurs late if it occurs. Its mortality is less than 20 per cent. Serum is hopeful.

Type IX resembles type I in its clinical appearance. Its death rate is about 25 per cent, while its bacteremia incidence is half that figure. Serum is being used.

Types X and XI are infrequent causes of pneumonia. They are causes after operations or trauma.

Type XIV is peculiar in that it is found in association so often with types I, VI and XIX, which are the common causes of pneumonia in children. When found under these conditions a blood culture should be done to determine the actual cause of the disease. The lung findings are those of a lobar pneumonia. The duration in children is long—ten days or more. Bacteremia is four times as frequent in adults (20 per cent) as in children (5 per cent). Pleurisy is frequent.

Types XV, XVI, XVIII, XIX are all infrequent causes of pneumonia. Type XVII causes a serious form of pneumonia, its death rate being over 30 per cent, though bacteremia incidence is low.

Type XIX is a frequent cause of pneumonia in children (5 per cent) and infrequent in adults (1 per cent). The best picture is that of a broncho-pneumonia, resembling type VI and pulmonary tuberculosis.

Morris Flexner, Louisville: Dr. Irons has given us a most comprehensive survey of our pres-

ent knowledge of the subject of lobar pneumonia, with observations from his own rich experiences. This disease, so familiar to all of us, may be said now to be in its third therapeutic stage. Our grandfathers treated it expectantly and hopefully. This was followed by the introduction of oxygen which undoubtedly has reduced the mortality, and we at present are armed with specific sera, the most potent weapon to date in the fight. The essayist has stressed the importance of early diagnosis; this cannot be over-emphasized; it is much better to waste an X-ray film on a normal chest than to appreciate the fact that the patient has lobar pneumonia on the 5th day. Too often definite physical signs have not appeared until some time has elapsed, and this in itself is a great handicap to the administration of serum. It is the duty of all alert doctors to-day to have the sputum typed at the earliest possible moment. I would also like to stress the importance of blood cultures in pneumonia. Here, again, we get an excellent idea as to the prognosis and the amount of serum to be given. In cases showing positive tests, the amount of serum necessary is always much greater than the amount to be used on cases with clean blood streams. The problem as to how long to administer serum in cases not responding, is one of the perplexing ones in this treatment. At times it is well to re-type these cases; occasionally it will be found that where there were two types in the original examination, there will be only one at times not corresponding to the serum being used. Tests for agglutinins in the blood are valuable in deciding when to stop serum, and modern hospitals should be equipped to do this. The ordinary case should respond to 200,000-300,000 units of serum, although in some of Bullowa's cases which I saw in his wards in the Harlem Hospital, two and even three times that amount of serum was given. Give large amounts early.

In closing, I wish the essayist would give us his opinion on lung suction as an aid to diagnosis.

Finally, one word about oxygen: To the man far removed from large centers, I should think Bullowa's nasal catheter would be a boon, as no tent is required. There are many of them in use in his wards and the patients are apparently as comfortable with them as with tents. As the essayist has stated, not every case of pneumonia needs oxygen therapy, only those with cyanosis, rapid respiration, and those with considerable moisture in their lungs. Bronchoscopy at times with the aspiration of thick tenacious sputum that cannot be coughed up may prove life-saving.

The rapid strides being made in the East in typing, and the distribution of serum by various local and state health departments, make us desirous of some such program in this part of the country.

A. T. McCormack, Louisville: As State Health Commissioner, I will ask the President to appoint a Pneumonia Committee to assist us in the preparation of the program in this state. Unfortunately, at the present time we are unable to provide the serum free. We have made a careful examination of 200 cases in various parts of the state, and less than 12 per cent of them can afford to pay for the serum themselves. Consequently it is a public problem and we hope very much that before a great while we will be able to provide all of you with the serum without charge, so that you can utilize it advantageously for your patients. That is one of the most important sections of the National Health Program, and we will look forward to assistance that will enable us to supply you with this serum.

We were very happy this morning to have the medical technologists hear Dr. Irons' paper. They are in session in an adjoining room and adjourned to come in here and hear this presentation. I think it is very important that we make them realize how much we are interested in the subject.

We are ready in the state laboratory and its branch laboratories to type pneumonia serum for you at the present time. We are unfortunate in not being able to provide you free with the serum when you need it. In a few communities in the state funds have been raised by Rotary Clubs or the Red Cross or other agencies for the purchase of serum where it is needed for the treatment of cases, and we hope that can be extended pending the development of the program.

This is one of the most important problems that confront us, and in this as in all of the other policies we desire to offer to the practicing physicians of the state all the assistance possible from the State Health Department. Of course I realize that you know it so well it is hardly necessary for me to reiterate that in no instance in this or any other disease will there be any attempt on our part to determine your method or character of treatment, but we want to be of assistance to you to do what you think needs to be done for your patient in the way you think it needs to be done.

E. E. Irons, (in closing): One of the most important pieces of work that I have seen was being carried on this morning by Dr. Simpson as I came into this room. He was discussing the technic of typing of pneumococci with a group of technicians. After all, those are the people who have got to help the doctor who is practicing medicine in determining what type of pneumococcus is present in the sputum of the ill person.

Dr. Simpson's suggestion that there must be a soluble toxin as well as other factors in the path-

ologic physiology of pneumonia seems fairly well supported by the fact that infections of the lung due to pneumococcus present an increased rapidity of respiration not found in any other lung disease to the same extent. This leads to the assumption, fairly well supported, that one of the reasons for the rapid respirations of pneumonia is not only the pleurisy, but a specific stimulation of the vagus fibers terminating in the lung by the action of the pneumococci in the lung tissue.

Dr. Simpson referred to the differences in distribution of different types. Some recent work has been done on distribution, and the epidemiology of pneumonia among children and among families of these children, and these studies indicated quite a difference in distribution of the several types. Types of the highest numbers appear much more frequently in the pneumonias of children than in the pneumonias of adults.

With respect to the question raised by Dr. Flexner, lung suction. I would feel as he does, rather hesitant to suggest that as a routine procedure. It is a valuable adjunct in the hospital where a large series of pneumonias are being studied and where it is desired to test the accuracy of sputum determinations. After the accuracy of sputum determinations has been established, the use of lung suction by puncture is probably not an advisable procedure for general use.

I have been much impressed by the Doctor who didn't get his technician. I think he ought to have that technician. I hope Dr. McCormack will get one for him somehow. That question of technicians brings up one of the questions that came before the Surgeon General's Advisory Committee in our meeting in Washington last year, planning for a nation-wide pneumonia program. It is all very well to say, "Yes, you should give your patient pneumococcal serum. Tell all your patients that they can have pneumococcal serum if they will ask for it." But suppose you arouse general hopes in the community that all patients with pneumonia can be treated successfully by anti-pneumococcal serum and then when the poor fellow gets sick tell him, "I'm sorry, but your type doesn't fit what we have." You see, one has to be careful in promulgating a program not to create a misunderstanding of the situation among the public at large. They should be told very distinctly that this program essays to offer them such sera as are available and that no one can guarantee that when they get pneumonia they will have the type that fits the serum. We should guard against over-enthusiastic statement of what had been so far accomplished.

Finally, any program must be so devised that

it will be helpful to the doctor but in all circumstances it must avoid telling the doctor what he must do; that is the business of the doctor who is taking care of the individual patient, who knows his patient. There may be things he doesn't know about typing and the use of sera, and which sera are available. That information should be given, but after that is done, then all the activities of the pneumonia program should be to furnish information and such equipment as is available through the funds available to the community, and let the doctor make the decision as to what he is going to do.

HYPERPARATHYROIDISM WITH CASE REPORT OF PSEUDO-HYPERPARA- THYROIDISM AND PSEUDO- HYPERPITUITARISM*

HARPER E. RICHEY, M. D.,

Louisville.

Hyperparathyroidism is a disease usually due to a functioning adenoma of the parathyroid glands, resulting in increased hormone production with a disturbance in calcium and phosphorus metabolism. The serum calcium level being increased and the serum phosphorus level decreased associated with increased excretion of both in urine. The bones being a storehouse of calcium and phosphorus, demineralization of bones results from the increased loss of calcium and phosphorus in urine. The bones become porous and filled with osteoclasts. The osteoclasts lay down new bone and are increased in number. Clefts may develop and enlarge to form multiple cysts with fibrous walls. Osteoclasts in certain areas may proliferate to form osteoclastomas producing osteitis fibrosa cystica multiplex or Von-Recklinghausens disease of the bone. The urinary calculi may be formed from the increased calcium and phosphorus, in some instances calcium phosphates may be precipitated in the kidney parenchyma, particularly are the tubules most involved leading to secondary kidney contracture and insufficiency. X-rays of kidney show stellate groups of punctate shadows outlining kidney pyramids. The replacement of so much of the narrow cavity of the bone by fibrous tissue sometimes lead to decrease of the hematopoietic elements and hence an occasional case of anemia and leukopenia may occur. The teeth do not take place in this generalized decalcification, and may fall out

because of jaw disease but will remain well calcified; this failure of the teeth to become decalcified is strong evidence against their being a reserved supply of calcium.

Clinical types of disease:

(1) Classical Hyperparathyroidism, (Von-Recklinghausens Disease). In this type the skeletal symptoms predominate and consist of decalcification, cysts, tumors and eventually fractures.

(2) Osteoporotic Hyperparathyroidism, presenting symptoms which are due to generalized decalcification with no cysts or tumors.

(3) Hyperparathyroidism with Nephrolithiasis, presenting symptoms which are associated with renal stones with no gross skeletal changes present.

(4) Hyperparathyroidism with Renal Insufficiency, symptoms are those of Brights Disease.

(5) Acute parathyroid poisoning, a condition simulating acute parathyroid poisoning in dogs with sudden death.

(6) Hyperparathyroidism simulating Paget's Disease. The existence of this group is not yet certain.

Symptoms and physical findings:

(1) Those due to Hypercalcemia: lowered excitability of muscles; hypotonia, lassitude and constipation; flat feet; loss of weight.

(2) Those due to Skeletal Involvement: spontaneous fractures; bone tenderness; bone tumors.

(3) Those due to Hypercalciuria and Hyperphosphaturia; polyuria and polydipsia; emesis; renal colic; renal impairment.

Why do some individuals with this disease develop bone lesions without lesions of the urinary tract and others with lesions of the urinary tract without bone lesion? Perhaps the following may in some way explain such a phenomenon. The amount of bone disease is proportional to the daily loss of calcium from the body, times duration of disease. The daily loss is dependent upon the output of the urine plus output of feces minus intake of food. Therefore a disease of short duration with high intake of calcium would make bone disease unlikely. The precipitation of calcium in the urinary tract will depend upon the excretion of calcium and phosphorus in urine, the alkalinity of urine and degree of polyuria. Therefore a severe degree of hyperparathyroidism could be associated with urinary calculi in a short time. It is a good policy to do a routine

*Read before the Jefferson County Medical Society.

calcium and phosphorus determination on all patients with urinary calculi. Albright, Aub and Bauer feel that hyperparathyroidism will prove to be a fairly common cause of urinary stones and in the future the case in which there is a stone and no bone disease will be the more common type of hyperparathyroidism.

X-RAY FINDINGS

There may be no skeletal changes found by X-ray. If such are found the following may be noted: (1) Increased radiability; (2) Deformities; (3) Cysts; (4) Tumors and fractures. Increased radiability is a fundamental finding, the others are secondary changes.

Since Hyperparathyroidism is a metabolic disease, demineralization must be generalized in all the skeleton. When there is some question of doubt one must decide whether he is dealing with a localized or generalized disease. Cysts, if present, are usually multiple, there may occur marked expansion of overlying bone. A Cortical cyst is especially suggestive of hyperparathyroidism. Tumors or osteoclastomas may occur in the jaws, at the ends of long bones or in the ribs. In contradistinction to cysts, they occur only where there is cancellous bone. Fractures occur through cysts or tumors. The terminal phalanges show soft tissue clubbing, partial resorption of bodies of terminal phalanges, fenestration of bone edges suggesting complete lack of cortex.

Urinary calculi or punctuate deposits of calcium in kidney parenchyma should be sought in cases of questionable hyperparathyroidism. An effort should be made to localize a parathyroid tumor. X-ray may show it to be in the anterior mediastinum or it may lie close to the oesophagus, so that fluoroscopy during administration of thick barium by mouth might help.

LABORATORY DATA

Serum Calcium and Phosphorus: A high calcium and a low phosphorus is present in this disease. Multiple Myeloma and Metastatic Malignancy may give a high serum calcium, but a high serum phosphorus is also present. Rickets and Osteomalacia often have low serum phosphorus but the serum calcium is seldom above normal, more often it is below normal and never is proportionally as high as phosphorus is low. The serum calcium and phosphorus should be taken on a fasting stomach. A serum phosphorus below 3.5 mg. per 100 cc. of blood and a serum calcium above 11. mg. per 100 cc. of blood should be suspicious, especially

if repeatedly obtained. An exception to this rule occurs when the disease progresses to marked renal insufficiency where a high serum phosphorus is obtained.

Urinary Calcium and Phosphorus Excretions: From a practical standpoint such are laborious to obtain, are seldom necessary and in border line cases are often not helpful. Thus Hypercalcemia is dependent on Hypercalcemia.

Plasma Phosphatase: Such is probably an index to the degree of osteoblastic activity. It is elevated in this disease in proportion to the amount of bone disease and is independent of the degree of hyperparathyroidism. The normal range is 2 to 4 units and following an operation it gradually returns to normal over a period of months which again suggests that it is a measure of the amount of bone disease.

Renal Stones: It is often important to analyze stones to see whether they are the type associated with this disease. Obviously they should contain large amounts of calcium and phosphorus.

Surgery: I shall no more than mention six factors which should be kept in mind in the surgery of the parathyroids.

(1) Normal and aberrant location of the glands.

(2) Familiarity with the reddish brown color and smooth surface of the glands.

(3) Differentiate from lymph nodes, collection of fetal fat and thyroid lobules.

(4) The surgeon can expect, given a marked degree of hyperparathyroidism, to find a sizeable tumor. Therefore, except in a very mild case, the surgeon need not stop at every minute body encountered; normal glands must not be removed because of danger of tetany.

(5) Hyperparathyroidism following operation may be very dangerous. Tetany is most marked with patients with most bone disease and probably can be attributed to this fact rather than atrophy of disuse of remaining glands. There is no objection to subtotal resection in these cases and when normal glands have been removed at previous operations this should be done, leaving a good blood supply and a piece of tumor larger than a normal gland.

(6) Surgeon should keep in mind the occurrence of multiple tumors.

Non-Surgical Treatment:

There is no successful treatment of this condition other than surgery.

(1) X-ray therapy cases followed by serum calcium and phosphorus determina-

tions showed no changes with massive doses of X-ray. X-ray of skeletal tumors should be avoided for although it will produce temporary benefit to the bone tumors it will not beneath the bone systs and tends to increase fibrosis of the marrow and enhance anemia.

(2) Dietary: High phosphate or calcium diets or preferably both will prevent decalcification but will increase kidney complications. Therefore, whereas dietary treatment may cure the skeletal involvement it does not prevent kidney damage and is to be avoided.

(3) Vitamin "D" Therapy: Viosterol in large amounts produce no appreciable effect on calcium and phosphorus balances.

DIFFERENTIAL DIAGNOSIS

(1) SENILE OSTEOPOROSIS: A condition in which bone disease is quantitatively decreased but qualitatively normal, the cause of which is underactive osteoblasts in laying down bone or overactivity of osteoclasts in resorbing bone. The end result is the same: X-ray findings are those of increased radiability, bone pain, fractures and deformities; blood shows a normal serum calcium, reduced serum phosphorus and a normal plasma phosphatase; bone biopsy shows fibrosis of bone marrow, increased osteoclasts.

(2) "PAGET" DISEASE (Osteitis Deformans):

(1) Spotty distribution of lesions.

(2) Presence of normal bone somewhere else in body, especially in small bones of the hands.

(3) The involved bones show in some instances characteristic enlargement, (Hyperostosis). Skull is thick, as well as giving a moth-eaten appearance as compared with the thin moth-eaten appearance in *ostitis fibrosa cystica*.

(4) Aside from the skull, the weight-bearing bones are the ones mostly involved. Such is not the case in *ostitis fibrosa cystica*. There is a coarse pattern to the trabeculation of the affected bones pathognomonic of Paget's Disease.

(5) Kidney stones appear, but much less frequent.

(6) Serum calcium normal or only slightly elevated (11 mg. per 100 cc.). Serum phosphorus normal or only slightly elevated tending to parallel calcium curve. Plasma phosphatase higher than in *ostitis fibrosa cystica*. The two diseases have little in common. However, from a practical standpoint a patient with Paget's Disease should have a blood chemistry done in hope of finding a compli-

cating hyperparathyroidism. For hyperparathyroidism with its generalized stimulus to osteoclastic activity may enhance the localized unknown factor stimulating osteoclastic activity in Paget's Disease, thus if the unknown factor causing Paget's Disease is present in a subthreshold amount, a superimposed hyperparathyroidism may make the underlying disease become manifest.

(3) Osteomalacia: A failure of calcium deposits in osteoid tissue with resulting widened osteoid seams. In this country is associated with fatty diarrhea and resulting lack of absorption of fat soluble Vitamin "D". The bones bend rather than fracture. Serum calcium is low, or normal, serum phosphorus is low, plasma phosphatase is high. Cases show rapid therapeutic response to Vitamin "D" in contrast to hyperparathyroidism.

(4) Solitary Cysts: This condition is localized, normal skeleton elsewhere, normal serum calcium and phosphorus and plasma phosphatase. Not infrequently such solitary cysts occur in more than one bone and such cases will, of course, suggest Von Recklinghausens disease.

(5) Solitary Benign Giant Tumors: This may be a completely localized condition or a part of an underlying hyperparathyroidism. If it is the former the remaining skeleton and blood values will be normal.

(6) Osteogenesis Imperfecta. (Fragilitas Ossium): A generalized bone disease with multiple fractures. Hereditary, and is apt to be associated with blue sclera and deafness. There is a depression of bone formation plus normal bone absorption. Bone biopsy shows no increase in osteoclasts, no fibrosis. Serum calcium and phosphorus are within normal limits, plasma phosphatase normal or only slightly elevated.

(7) Multiple Myeloma: From an X-ray standpoint may closely resemble hyperparathyroidism. Hypercalcemia has been reported but hyperphosphatemia is not associated consistently with it. Secondary renal changes develop similar to those in hyperparathyroidism. The diagnosis depends upon the following: (a) bone biopsy; (b) lack of phosphatemia; (c) plasma phosphatase normal; (d) Bence Jones proteinuria.

(8) Metastatic Malignancy: This seldom occurs below knees and elbows. The uninvolved bone remains normal. Hypercalcemia may develop but not hyperphosphatemia.

(9) Basophilic Adenoma of the Pituitary, (Cushing's Disease): Osteoporosis is a feature of the syndrome associated with baso-

philic tumors of the anterior pituitary gland. It has not been decided whether or not a secondary hyperparathyroidism is present in such cases due to hyperplasia of the parathyroid glands. Obesity, rheumatism, amenorrhea and hypertenison in Cushing's syndrome are not features of simple hyperparathyroidism. Other conditions in which X-ray might suggest hyperparathyroidism are: (1) radium poisoning; (2) erythroblastic anemia, (Cooley's Anemia); (3) lipid dystrophies.

Summary: Hyperparathyroidism is a disease which can hardly be called common, but it must be frequently considered when any multiplicity of symptoms is present. Failure to make the diagnosis is regrettable in that therapy for it is highly successful.

CASE REPORT

Pseudo-Hyperparathyroidism and Pseudo-Hyperpituitarism: Patient, white, female, married, age 24, was first seen August 11, 1934, with a left kidney pain. Clinical impression at that time was left sided pyelitis which improved on urinary antiseptics and forcing fluids. Recurrent pyelitis April, 1935, with chills, fever and pain. At that time patient was advised to have an intravenous pyelogram for study of the urinary tract. This was done by Dr. Jos. Bell May 13, 1935, showing excellent visualization of the kidney calices with some roughening of upper calices, a small stone at juncture of upper and lower two-thirds right ureter, slight ptosis of right kidney but no impairment of drainage of kidney.

Patient persisted with pyuria, frequent attacks of kidney colic and passage of stones. Last menstrual period September 15, 1935, some breast changes, morning nausea, and vomiting on two occasions. Uterus was found to be large, soft, approximate size of two months pregnancy. December 4, 1935, patient was cystoscoped and studied by Dr. Owsley Grant. Flat X-ray plate showed a large stone in pelvis of right kidney and another at right ureteral orifice of bladder. Left kidney appeared to be normal and no stones were seen. December 7, 1935, patient passed two small stones and five days later a flat X-ray plate showed a small stone separated from the one in the right kidney pelvis and located in the upper third of the right ureter with stone in right ureteral orifice of bladder still present. Dilation of right ureter was done by Dr. Owsley Grant and December 14, 1935, patient passed a large, soft, easily crushed stone.

January 13, 1936, since I had been laboring under the impression that the patient was pregnant, because of absence of menses, nau-

sea, breast changes and apparent enlarged uterus and since by this time patient should have had some abdominal enlargement, another vaginal examination was done. At this time there was a recession in size of breast, uterus was the same size and consistency; consequently I felt I was dealing with a metabolic disturbance causing amenorrhea and stone formation in kidney, probably hyperparathyroidism and pseudo-hyperpituitarism. January 15, 1936, X-ray showed two stones in right kidney pelvis and stone in right ureter 1 1-2 inches lower than on previous examination. February 13, 1936, a blood calcium 13.8 mg. and blood phosphorus 2.4 mg.-ratio 1-5.7; such findings were suggestive of hyperparathyroidism. X-ray of chest showed calcification of lower ribs, X-ray of bony pelvis showed no changes. Patient was given 2 cc. Antuitrin "S" every other day for 15 doses. Bone phosphate tablets 2 three times a day. February 28, 1936, a scanty menstrual flow was produced. March 2, 1936, X-ray of skull and long bones showed no abnormal changes. March 18, 1936, scanty bleeding. March 24, 1936, X-ray showed two stones in right ureter and one in kidney pelvis. Blood calcium 10.9 mg., blood phosphorus 2.9 mg. March 27, 1936, a high Vitamin "A" acid ash diet with two capsules of Haliver Oil was instituted as suggested by work of Higgins of the Crile Clinic in urinary lithiasis and four days later two stones were passed from the right ureter, largest measuring 19x8 mm, other 17x7 mm. A quantitative analysis of the stones revealed calcium and magnesium carbonates, phosphates and oxalates with phosphates predominating and material in its entirety inorganic in character.

March 30, 31, April 1, 1936, patient menstruated, stopped for four days, then continued bleeding for eight more days. April 27, 1936, no bleeding after last menstrual period for thirteen days, then began with paroxysmal cramping which was interpreted as pain from ureteral colic at the time. That evening patient passed a small foetus approximately two to three weeks development. The stimulation of the ovaries by Antuitrin "S" must have produced adequate ovulation which before this time had been lacking. May 21, 1936, patient menstruated three days, and on June 15, 1936, patient menstruated again, cycle 25 days. July 28, 1936, X-ray showed stone in right kidney pelvis with one small stone in calyx. There was no decrease in size of stones as compared with last film.

While patient was away on a trip in Au-

gust she had a left sided renal colic, the X-rays showed no stones in that side. October 1936, patient passed a small stone from left ureter. November 16, 1936, passed a large stone from the left side and prior to that time during October had been passing gravel and stones size of pin heads. November 20, 1936, blood calcium 9.7 mg. blood phosphorus 4.8 mg. Because patient was showing no decrease in formation of stones and had a persistent pyuria and hematuria although blood calcium and phosphorus were normal, was referred to Dr. C. W. Dowden for any further suggestion and treatment. Dr. Dowden did not feel justified in suggesting surgery of the parathyroid glands and his only suggestion was a tonsillectomy because of the experimental work of Rosenau in the production of kidney stones by the injection of material obtained from focal infection of human beings having kidney stones.

February 16, 1937, patient has not menstruated for three months, by examination it was estimated that she was three months pregnant. Pyuria persisted throughout pregnancy in spite of treatment with menadione, reduction of calcium intake, forcing fluids, etc. With only one attack of kidney colic a dead foetus was delivered. September 7, 1937. Her perineum was so friable that a second degree tear was produced by a vaginal examination. Her post partum period was normal with no kidney infection. March 8, 1938, patient was again seen in office, feeling fine, a gain of five pounds weight, no urinary symptoms, last menstrual period February 7, 1938. It was later found that she was again pregnant. Her urine throughout pregnancy was loaded with pus, occasional occult and microscopic blood. She was delivered November 13, 1938, of a normal, female baby and during post partum period had a low grade kidney infection which was controlled by sulphanilamide. Since the occurrence of patient's first pregnancy there have been only three attacks of kidney colic of a minor nature and has passed no further stones.

January 25, 1939, re-examination of the urinary tract shows the stone on the right to have increased in size very definitely. All parts appear to be united. The stone is approximately twice as large as it was before. No other abnormalities are noted. The stone fills the kidney pelvis and goes out into minor calices. Eventually will destroy the function of the kidney. No stones were found in left kidney, ureters or bladder.

DISCUSSION

Austin Bloch: I have never seen nor read of a case like the one Dr. Richey has reported, but I think it is a case of hyperparathyroidism and that further observation will indicate this. His blood-chemical findings are such as are generally thought to be pathognomonic of overactivity of the parathyroid glands, and I have seen no report of spontaneous recovery from this condition. The careful observation now in progress should continue.

Not all cases of hyperparathyroidism are associated with adenoma. Albright has reported several cases in which operation disclosed the presence of hypertrophy of all four parathyroid glands, with gross enlargement corresponding to hypertrophy of individual cells, rather than to excessive multiplication of cells. By injecting serum from patients of this sort, Albright was able to produce similar hypertrophy in the parathyroid glands of laboratory animals. It cannot be said finally that this experiment incriminates the pituitary of oversecreting parathyrotropic hormone in such patients, since there are several other influences that may lead to parathyroid hypertrophy; among them, pregnancy, rickets, osteomalacia, and nephritis with retention of phosphate. The effort to control the pituitary secretion of parathyrotropic hormone by the injection of estrogenic hormone has usually been vain, although one success is in the literature.

The pharmacology of parathyroid hormone is not entirely clear. Whether, as Albright supposes, the elevation of blood calcium after injection of parathormone is mediated by increased phosphate excretion and a consequent suppression of bone-formation, or whether, as Collip appears to prove, there is a more direct influence upon blood calcium, we may not know until laboratory methods for the necessary blood-chemical determinations have become accurate and fool-proof.

R. A. Griswold: Dr. Richey asked me to say a few things about the surgery in this condition. Before I do that I should like to discuss the chemical findings in a case here at the City Hospital. The chemistry in the estimation of blood calcium, is exceedingly difficult and there are many pitfalls. Findings are not consistent. In daily specimens we found considerable difference in findings from two different laboratories, and again from the same laboratory on successive days. The estimation of calcium balance is technically easier for the chemist and more accurate. For the clinician it is more difficult. For the calcium determination one has to get a dietitian to put the patient on a known calcium intake and collect 24-hour specimens of feces and urine. If the calcium output is greater than the intake, the patient has hyper-

parathyroidism. This is more accurate than the blood test.

The specimen we had was one of the largest parathyroid growths and weighed 18.2 gms. Surgery presents certain difficulties but they are not insurmountable. The normal position of the parathyroids is posterior to the thyroid gland. There is one on each side at the upper pole, the others are in relation to the inferior thyroid arteries and the recurrent laryngeal nerve. The surgeon has to invade that portion of the neck usually avoided in thyroid surgery and inspect all four parathyroid glands, without injuring any of those structures too greatly. They are frequently anomalous. There may be more or fewer than four. They may be anywhere from the upper borders of the larynx to the superior mediastinum. The operation is not complete until the region between the carotid sheaths from the upper border of the larynx down into the superior mediastinum has been explored. The reason for exploration in such a thorough manner is that these tumors are frequently multiple. The finding of one does not mean that cure is made by removing one tumor. There may be enlargement of all four parathyroids and sections may have to be taken from each. The greatest danger to the normal parathyroid is damage to the blood supply. It is difficult to inspect a normal parathyroid gland without damage. Post-operative tetany may occur even without damaging the blood supply. The avoidance of injury to the other parathyroid glands is very important. Post-operative care with large amounts of calcium, vitamin D, and parathormone if necessary, are essential.

What do we gain by operation? In bone lesions we get re-calcification of the bones, and disappearance of bone tumors. This may take considerable time. Removing parathyroid glands does not dissolve the kidney stones, but it does prevent the formation of new stones.

Owsley Grant: What this case is I am not going to attempt to solve. I leave that to the more ambitious medical men. It is evident that this woman did form stones and they were still going on. The case is of interest to urologists for we are always looking for the cause of stones. There are three classifications: infections, stasis, and some sort of hypersecretion or excretion of mineral elements in the kidney. Here the influence of the parathyroid comes into play. The question is whether the hyperparathyroidism is alone responsible for the glandular change that takes place, or something in addition that causes the formation of stones. By that I mean the formation of stones alone is caused by probable existence of deposits in the kidneys. There is definitely in each individual an ability to combat this power, wherever it is present, in the blood. It has

been shown in a group of 83 patients with hyperparathyroidism, that 27 per cent had some calculi. That makes it important that we should look for renal stones. In Braasch's analysis of 1200 cases of renal calculi, they were only able to ascribe .2 per cent as being connected with hyperparathyroidism. The most important thing about parathyroidism in connection with stone formation is that we should be extremely careful to be sure that the patients we operate on do not have hyperparathyroidism because there is likelihood of recurrence of stones.

Harper E. Richey, (in closing): My principal object in presenting this paper was to elicit some discussion which might aid me in making a more definite diagnosis of this case. It is interesting to note that after an amenorrhea of seven or eight months this patient began menstruating after a month and subsequently became pregnant, whereas before she had been sterile; and that since her pregnancies she has passed no further stones; X-rays of this patient's pituitary fossae showed no abnormalities. I think Dr. Bloch very well answered the relationship between the parathyroid and pituitary in his discussion. I deeply appreciate your discussion.

SOME GOITRE PROBLEMS*

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Just as in many other conditions problems arise in the management of goitre cases. The correct solution of any problem presented by a goitre case is apt to be important and some may be vital. The writer, in an analysis of his own experience, has attempted to break down the whole subject into separate problems and plan for himself their recognition and, if possible, their solution. From a longer paper, now in preparation, of the same general plan, several goitre problems have been selected and will be briefly presented for discussion to-night. Each problem might properly fill a chapter, so, much room for discussion will be left.

Locally the shortage of material is a problem. At present the story of the diagnosis and treatment of goitre is fairly complete—the literature massive and readily at hand. Most errors now made are probably not due to lack of knowledge, but to its application to particular cases—errors of medical or surgical judgment. In few other situations does an extensive personal experience in the actual handling of cases pay bigger dividends. Such experience here is apt to accumulate slowly for any one. Here the incidence of

*Read before the Jefferson County Medical Society.

goitre is relatively low. Almost every Doctor must see an occasional case and some will handle a considerable number but none can show case reports in big figures such as come from some of our large clinics and certain goitre areas. This situation is something of a challenge. Training in centers furnishing a great deal of material helps much and a very intensive study of the moderate amount of material which does come to hand in actual practice here should keep one well in line. Though disadvantaged somewhat, in this particular, thorough competence is and should be demanded of us and results one whit below the best should not be tolerated.

In many cases the diagnosis is obvious. The goitre can be seen, palpated, measured, outlined. This often incomplete diagnosis may be furnished by the patient and rightly or wrongly blamed for all symptoms. The type of goitre often is plain, too, on inspection and palpation—nodular or hyperplastic. Toxicity—hyperthyroidism or dysthyroidism—in pronounced or late cases may be plainly evident. Such cases, so simple in so far as the diagnosis of goitre is concerned, present problems to be solved if errors in the treatment are to be avoided. In the case of obvious nodular goitre symptoms complained of may be due to some other condition, e. g. neurasthenia, neuro-circulatory asthenia, incipient tuberculosis, organic heart disease, etc. If, in such cases the goitre is of the simple non-toxic variety, its removal does not cure and may even aggravate the patient's condition. If hyperthyroidism is evident or easily proven the problem of associated disease is important. Hyperthyroid cases may certainly be afflicted with other medical or surgical conditions at one and the same time. Thus a diagnosis of goitre, or hyperthyroidism, only, when it should be that diagnosis plus that of some other important condition may lead to failure to relieve, or worse in treatment. Before treatment of any goitre case is undertaken other conditions must be eliminated or included by a carefully taken history, a thorough physical examination and at least the routine laboratory work if error is to be avoided. These precautions seem simple, should be routine, but in frank, obvious cases—the rest of the examination is more apt to be incomplete or done in a perfunctory manner. In this obvious group of cases answer these questions: Is there an added diagnosis to be made? Is this goitre of the toxic variety (adenomas)? In any toxic case just about how toxic? and how late?

This last question brings up the consideration of degenerative changes in other organs due to long continued toxicity. Such changes may mean failure of treatment or incomplete cure. In cases frankly toxic with complicating surgical conditions we face an important problem—Which to attack first? Frequently infected teeth, tonsils, chronic cholecystitis, etc., etc. plague the goitre case. Our general rule here is: In very toxic cases no operative procedure not directed to the control of the function of the gland should be done. In fact, thyroidectomy is deferred until hyperthyroidism is well under control or until persistent efforts show what we think is maximal control—much as in surgery of the diabetic. The toxic goitre case will do badly in case of added acute, severe disease, accidental injury or outside operations and the goitre condition is apt to be aggravated. In mild, or doubtful hyperthyroid cases it may be advisable to remove foci of infection or other aggravating conditions first, in an attempt to quiet hyperthyroid activity.

We have spoken of obvious goitres and some of their problems. Now we have a group much smaller in number and more difficult. Most observers agree now that a thyroid gland not visibly or palpably enlarged may be the source of marked hyperthyroidism and demand even radical treatment. All the diagnostic problems of the group mentioned above are presented here plus difficult goitre diagnosis. In the absence of any local evidence of thyroid disease it is, contrary to the rule in the first group, proper to consider the thyroid innocent until otherwise proven. Here comes into play in differential diagnosis all we know, and can apply, of several mental, nervous, cardio-vascular, and other conditions whose signs and symptoms may simulate hyperthyroidism (nontoxic goitre really has nothing to do with this group).

Neck contours vary considerably normally and small toxic adenomas may be well hidden, e. g. substernal and disclosed on examination only by X-ray. Then great care in history taking, repeated examinations, consultation with cardiologists and neurologists or psychiatrists, repeated B. M. R. tests and a carefully planned therapeutic test should afford the correct diagnosis and indicated line of treatment. This therapeutic test (response to Lugol's solution, etc.) is directly in line with preparation for operation and may be planned with such dual purpose. These cases are often very difficult of diagnosis and some are missed for

long periods. All are important since surgical attack on an innocent thyroid gland presenting symptoms similar to those of hyperthyroidism but due to another cause can do no good, possibly much harm. Surgery may be indicated, however, no matter what the size of the gland. In cases of simple goitre (simple adenomas, etc.) wrongly adjudged the cause of certain symptoms, goitre surgery leaves the patient with his disease. In these toxic cases without enlargement medical treatment fails or often alleviates just enough to encourage delay and greater danger.

Certainly accurate, complete diagnosis is one of the first and most important problems encountered in the management of hyperthyroid cases and a long list of signs and symptoms can be named. A dependable personal evaluation of these signs and symptoms must be had or confusion results. Of course, a discussion of all the list is impossible here but a careful study of each—of its real practical value and its place in the picture of hyperthyroidism is very necessary. For example: Do the eye signs—outside of unquestioned exophthalmus—help you much especially if somewhat vague? How much dependence is to be placed in nervous, mental and emotional states. How do you rate the B. M. R. test in actual practice? Such questions usually elicit a wide variation of opinions.

This is unfortunate but inevitable. Why? Some of these signs and symptoms may be absent in one case, vaguely present in another and pronounced in a third. B. M. R. tests vary widely even in the same case—and in normal persons, at different times and under different conditions. (Boothby, Berkson and Plummer, American Association for study of goitre P. P. 143-151—1937). May this test be safely used as a test of operability? Some apparently make this test of first rate diagnostic and prognostic value. Its dependable value in each situation is actually very limited. As remarked the list of signs, symptoms and tests for hyperthyroidism cannot now be fully discussed. It is mentioned as a problem in hyperthyroid cases. Vague, doubtful signs are an abomination and may only confuse one. Diagnosis and any radical treatment of hyperthyroidism should depend on a well formed picture made up of signs, symptoms, and tests present and positive grossly enough as to leave no doubt. If a positive picture can not be made out, delay is probably the safest course to follow.

One important problem to be decided

early in thyroid cases is as to whether a given case properly belongs, and may hope to continue, in the medical group. Certainly there is an important medical side to the treatment of all goitre cases if only in pre-operative and post-operative treatment. Some cases e. g. adolescent goitres, certain functional enlargements and some mild, early toxic cases, may prove to be medical throughout. It is our practice to consider definite adenomas—simple or toxic—surgical from the first. One must see the whole picture from the beginning. A certain percentage of simple adenomas becomes such deformities that removal is demanded. A percentage will become cancerous and a larger percentage will finally become toxic. So these tumors should be removed early.

Frankly, toxic goitre should be considered mainly surgical from the start—this includes exophthalmic cases in children. We know that toxic cases may be temporarily greatly benefitted by medical treatment—by X-ray or radium—and we use or advise such treatment but only in pre-operative treatment and occasionally in mild cases and mild residual post-operative cases. In simple adenomas the surgical mortality should approximate zero. The surgical mortality in toxic goitre in really competent hands is around one per cent, and the post-operative morbidity in practically all cases, will be that due to toxicity too long endured. The percentage of surgical cures cannot even be approximated by other methods to date. Our general rule is: Any tumors of the thyroid gland and all frankly toxic cases are surgical in the main.

Time limits me to the mention of just one more goitre problem to-night. If a case is considered a definite surgical one just when is the patient ready for operation? With the understanding that very toxic goitre cases withstand any trial badly and with the conviction that carefully planned and perhaps repeated and prolonged pre-operative treatment can be expected, in practically all cases, to bring the toxic condition under temporary control we have, for several years, insisted on practically complete control of symptoms before operation. Simple goitre may face operation in a day or two after admission. Toxic cases may require days, weeks and rarely months in preparation. Bed rest, Lugol's solution in doses up to 60 M. daily by mouth or 100 M. per rectum in all toxic cases, high caloric diet, often infusions, in some cases transfusions and sedatives as required—with digitalis in some decompensation and auricular fibrillation cases and an

intelligently applied mental and emotional build-up continued long enough will finally really control all but the very exceptional case.

Practically all goitre emergencies are medical, not surgical. Since following this definite plan of preparation no case has been turned back as inoperable and no case has been lost under the medical or surgical part of treatment. Our series is not large comparatively, but large enough to speak eloquently for more complete pre-operative treatment—no matter how long continued, and for exact judgement as when the patient is ready for surgery.

DISCUSSION

A. M. McKeithen: Although we are in a region where goiter is not so prevalent, the question of accuracy in diagnosis is certainly most important. It is important to diagnose and properly treat patients who have hyperthyroidism and probably equally important to differentiate those who do not have but who might be suspected. Hyperthyroidism is primarily a condition of increased basal metabolism and the symptoms are those due to increase in basal metabolism. However, many of the symptoms are not pathognomonic and may be associated with various other conditions. The patient may present symptoms of palpitation, prominent eyes, moist skin, and constriction of the neck. Most of these patients will not be hyperthyroids, especially those complaining of constriction in the neck which is much more often associated with neurasthenia. The symptom that is most characteristic is loss of weight and strength in the presence of a good appetite. If the weight is stationary, or if the appetite is not good and there is a loss of weight the chances are against hyperthyroidism. In the physical examination a change in blood pressure is an important finding, an increased pulse pressure being most significant. In adenomatous goiter with hyperthyroidism we get an increase in both systolic and diastolic pressures. In exophthalmic goiter we may have normal or increased systolic pressure with a decrease to a slight increase in diastolic pressure. The positive symptom of intolerance to heat is also significant.

In borderline cases too much dependence can not be placed on the accuracy of the basal metabolism test. A Basal Metabolism Rate of plus 30 or above is unquestionably an indication of hyperthyroidism. Tests that are much lower than this should be repeated, some of them several times. Basal tests are subject to errors. Some machines were never accurate, some may develop leaks, technicians may make errors. Leukemia, anemias, some disturbances

of the pituitary or adrenals may cause alterations in the metabolism. The patient may have a cold, a fever, or be very nervous and breathe too fast, the breathing of the cardiac patient may be labored—all these will increase metabolism. There is also some intra-individual and inter-individual variation.

It is a rather unfortunate nomenclature to speak of "exophthalmic" goiter as in only about 25 per cent of the cases is exophthalmus present. It is a very positive sign when present. The vast majority who do not have exophthalmus will have a stare expression of the eyes. Stare is more indicative of the present status while exophthalmus is an index of the past status.

It has been adequately proven that all cases of hyperthyroidism should be treated surgically. If there is any doubt as to the absolute diagnosis wait and observe, or we may give iodine as a therapeutic test but with the plan to go ahead with operation if there is a satisfactory response. If given iodine without surgery many patients will become iodine fast and subsequently will not respond satisfactorily to it and will be poorer operative risks. Iodine should be reserved for pre-operative and post-operative treatment. Never is hyperthyroidism an indication for emergency operation, but unnecessary delays should be avoided as degeneration of vital organs occur thereby increasing the risk.

The optimal time for surgery is determined by the general clinical picture of the patient. A prominent feature, as noted, is loss of weight and strength and especially, as pointed out by Plummer, loss of strength of the quadriceps muscle. In order to conserve and build up strength these patients should not remain in bed all the time during the period of preparation, but should be up two to four hours a day. Any patient who is unable to step up on an ordinary chair unassisted is not a good surgical risk because he is so weak. In exophthalmic goiter we characteristically have periods of remission and periods of exacerbation. Obviously we should operate during a period of remission, while the B. M. R. is falling, the pulse rate is dropping and the weight and strength improving. In adenomatous goiter operate when it is apparent that we have obtained maximum efficiency of heart function and when the strength is built up sufficiently.

Irvin Abell, Jr.: In 600 consecutive thyroidectomies we have had 20 deaths, a mortality of 3 per cent. Of these one died of an uncontrollable thyroid storm, two of cerebral emboli, and the remaining seventeen of myocardial failure. All seventeen were preoperatively classified as thyrocardiacs, this classification indicating that in the presence of a known thyrotoxicosis there was either a persistent

auricular fibrillation or the early clinical picture of cardiac decompensation. It may be stated that thyroid disease, if permitted to progress untreated, will eventually terminate in a cardiac death. The relationship between the mortality of thyroid surgery and the degree of cardiac damage is direct.

If in a patient who has passed through the adolescent period of life a small adenoma is seen, there are several assumptions which one may with great safety make. The adenoma will almost certainly not disappear: it may be expected in the majority of cases to increase in size, the rate of growth being unpredictable; in 15 years toxic hyperplastic changes are to be expected; if the adenoma should escape this change, when the patient passes 50 a toxic degenerative change will threaten; and finally, there remains the inevitable peril of carcinoma. As regards the toxic changes, these attract clinical attention by forming one of three patterns. First, the fully developed clinical characteristics of thyrotoxicosis are presented, in which case early surgical intervention occurs. Second, the patient over a period of months may complain of the vague symptoms usually associated with minor nervous disorders, in which case surgical intervention is delayed while permanent cardiac damage progresses. And third, the patient seeks medical assistance because of cardiac difficulties, in which case the heart has undergone in most instances irreparable injury with an exhausted, limited reserve. As regards the possibility of malignancy, carcinoma, which constitutes but 1 per cent of all thyroid disease, is found in over 91 per cent of all instances in pre-existing adenomas. There are concerning this phase of thyroid disease two facts which are of major importance. Carcinoma may develop in a small adenoma no larger than 1 millimeter in diameter; and, while usually seen between the ages of 40 and 60, it has been found in children no older than 9.

I am not saying that all adenomas must be removed. I am not saying that any single non-toxic adenoma must be removed tomorrow or next week. I am merely suggesting that there are for removing a non-toxic adenoma early in its clinical existence two very sound reasons, the dangers created by toxic and malignant changes. If the patient is unable to appreciate these dangers, such an adenoma should be removed when first diagnosed. If, on the other hand, the patient's intellectual level is higher, it should be pointed out that such tumors grow, undergo changes which later require surgery, and in some instances become malignant and that while in its present form there is no urgent reason for immediate operation, it should at a convenient time be taken out in the near future.

David S. Traub: I was especially interested this evening in the discussion of the criteria for

operation in patients with hyperthyroidism. When is a patient ready for thyroid surgery? I have been interested of late in a phase of hyperthyroidism, knowledge of which has not been very widely disseminated, that is the relationship of hyperthyroid states to hepatic damage. Recently work has been done which I feel is very important, namely work with the estimation of hepatic function in these states, such as the hippuric acid test, galactose tolerance test, and various dye tests. Probably of these tests the hippuric acid test is as reliable as any, and within the next few months the test will probably be so simplified and so standardized as to render it adaptable even to office use. Estimation of hepatic function will enable us rather accurately to predict whether or not the liver is adequate to the situation.

Now in what particular way does hepatic function influence the hyperthyroid state or vice versa? In various ways. It is common knowledge and not an uncommon occurrence to find mild degrees of icterus in goiter. The icteric index is often slightly elevated. Mild degrees of hepatitis and even mild atypical forms of cirrhosis have been described. Probably one of the most important aspects of the question is the fact that in extreme hyperthyroidism the liver is depleted of glycogen much as it is in diabetes. In these extreme cases it is not safe to operate upon them for we now know that the incidence of post operative thyroid crisis and sudden death is increased many fold. When the hippuric acid test returns to normal, and sugar has been supplied in adequate quantity we can be quite sure that at least the liver factor is in a position to tolerate surgery. The glucose tolerance test is unreliable because too many factors influence it in this condition. The abnormally rapid rate of glucose absorption from the bowel in this condition tends to nullify all other aspects of the glucose tolerance curve.

Carrier-Borne Typhoid in New York State.

—Stebbins and Reed point out that 570 chronic typhoid carriers have been declared in New York State from 1911 through 1935. Exclusive of fifty-nine carriers discovered in state institutions, 72 per cent of all carriers were discovered by epidemiologic investigation of sporadic cases of typhoid. The incidence of typhoid among the household contacts of carriers was found to be forty-two times that in the general population. The ratio of cases to carriers before and after discovery was significantly different, entirely as the result of a high ratio in the first ten years of "carrier age" before discovery. The attack rates among unvaccinated household contacts of carriers was studied by means of "exposure age" and "carrier age." The attack rate among unvaccinated household contacts of carriers was found to be five times that of vaccinated contacts.

PRIMARY MALIGNANT TUMORS OF BONE*

W. M. EWING, A. B., M. D.,
Louisville

Since the days of the alchemists of old there have been certain fundamental problems which have irritated and stimulated the minds of thinking men. Today we are living in a peculiar and perhaps an extraordinarily historical era. Besides the many unusual and strange things that would meet the eyes of our grandfathers, could they walk on earth again, there are other things that we may know which as yet are not within our ken. One such thing is the recent increase in the average span of life. Being physicians, and interested in humanity as we are, it is of vital importance that we give more attention to heart disease and malignancies, the two great reapers of elderly lives. No less important is a group of malignant tumors found in young individuals. I refer to the subject we shall consider tonight, Primary Malignant Tumors of Bone. I hope the understanding of these lesions is something that we, who live today, may leave to help the youth of tomorrow.

Before going into a discussion of malignant tumors, I would like to speak, in a broad sense, of the zone between the physiological and the pathological actions of bony tissues. An understanding of certain phenomena conveys, to my mind at least, a better judgment in differentiating non-malignant from malignant bone tumors. For example, if you should look at a microscopic section, made from an area of callous formation, following a fresh fracture, you would probably say, as I did, "There is a bone tumor that is really going wild, grade four malignancy." In another instance, I remember operating on several patients for so-called osteomyelitis of Garre, a condition in which there is piling up of cortical bone which stretches the periosteum and causes great pain because this structure, acting as a de-limiting membrane, receives an epicritic nerve supply. All of these cases were closed tight, healed primarily, and cultures taken at operation were sterile. There are cases of low-grade osteomyelitis, but I prefer to call the lesion to which I have just referred, Sclerosing Disease of Bone. It is a distinct pathological variation constituting a disease entity.

CLASSIFICATION

Primary bone tumors are best classified

*Read before the Jefferson County Medical Society.

when we divide them into osteogenic or those derived from bone or bone producing tissue and non-osteogenic tumors. Metastatic tumors of bone are all malignant, but along with certain inflammatory conditions, they are no longer accepted by the Registry of Bone Sarcoma of the American College of Surgeons and are not included in the scope of this paper.

In the osteogenic group we have Osteoma, Osteochondroma, Chondroma, and Giant cell tumors, all of which are benign and hence will not be discussed here. The malignant osteogenic tumors are classified as Osteolytic sarcoma, Chondromyxo-sarcoma, Chondroblastic sarcoma, Chondrosarcoma, Fibrosarcoma, and Osteoblastic sarcoma. As one would surmise, the division of these different types of malignant osteogenic tumors depends upon the histological structure of the growth. Any given tumor may lead to a wide variance of opinions by different pathologists which can be understood only by the knowledge that osteogenic sarcoma may be composed of any of the elements or by-products of the process of bone formation. For example, to consider the pathology in a simple form, the types of tissue which may be found are: 1. Myxomatous, which refers to a gelatinous, gray, and translucent tissue. 2. Chondromatous, which means a type of cartilage which is embryonic and very much like the myxomatous material in its cellular and staining qualities. 3. Osteoid tissue which is a structure resembling bone, but has not yet been infiltrated with bone salts and hence has not become hard. 4. Osseous material which is osteoid tissue plus the mineral salts. Except for the myxomatous tissue, any of these substances may be, and are, found in the benign as well as in the malignant tumors. And in all cases combinations of these various tissues are found as indicated by the classification.

Osteogenic sarcomas may be classified clinically according to the X-ray appearance of the tumor into two types, osteolytic and sclerosing or ossifying. In the former type, a great deal of bone resorption or dissolution is present. In the latter a large amount of dense bone is seen.

The chondroblastic and osteoblastic types refer to those tumors with very immature cells and are more embryonal and malignant in their appearance. Classification of this group could be discussed at length, but I shall only mention one other type, the telangiectatic osteogenic sarcoma. This means a tumor which is more vascular, metastasizes easily, and does not possess the characteristic tissues previously described. The

appearance of some of these is extremely characteristic, while in other cases there are mixtures of telangiectatic areas with medullary and sub-periosteal portions, and in not a few cases there are areas made up of blood spaces, hemorrhage, and we have medullary and telangiectatic periosteal sarcoma. Nevertheless, the characteristic form grows very rapidly and destroys the bone promptly. Spontaneous fracture and pulmonary metastases are early symptoms. The disease as far as I know is always fatal.

Now we come to the non-osteogenic group of primary tumors of the bone, all of which are malignant. The first of this group is the periosteal fibro sarcoma. Many men will object to classifying this in the non-osteogenic group, however it arises from true connective tissue of the outer coat of the periosteum and is like fibro sarcoma anywhere else in the body. These may be classified as spindle, round cell, large and small, etc; however this is genetically meaningless. Furthermore, this group does not infiltrate the bone as the osteogenic tumors do. There may be erosion of the shaft as seen in the roentgenogram, however this is due to pressure as is sometimes seen from an aneurysm.

The second type is myeloma, which are tumors of bone marrow. Although it is a wide assumption, every cell in bone marrow seems at times capable of producing a tumor. The commonest of these tumors is called plasma cell myeloma. Just to mention a few we have myelocytoma, erythroblastoma, and lyposarcomas. The last type is very rare.

In recent years at the Memorial Hospital in New York City, it has been found necessary to add to the list of myelomas, a group of tumors having endothelial characteristics. However, it is generally felt that this tumor should be classified in a group to itself, and it is commonly known as Ewing's tumors. This malignant bone tumor simulates in its clinical course a bone infection, hence in operating for osteomyelitis in children, one should be extremely cautious in order not to overlook a tumor process.

DIAGNOSIS

In the diagnosis of bone tumors, one should consider every new growth, or abnormal mass of tissue found, as a malignant tumor until proven otherwise. When one has taken a careful history, made a thorough physical examination, and obtained X-rays which can be scientifically interpreted, frequently he has only begun the investigation necessary to adequately classify and treat the patient. Any bone tumor possesses potentially malignant tissue and even in those regarded as

distinctly benign, malignancy has occasionally occurred. For this reason the most important single differentiation, which is to determine whether the mass is benign or malignant, may offer the most difficult problem. It is my feeling that in some cases radical treatment may be resorted to at once, however there are many cases where a biopsy is essential. Particularly is this true in solitary bone lesions of a cystic nature. Preferably a frozen section at the time of the biopsy made by a pathologist thoroughly competent to render judgment regarding the advisability of radical surgery should be done. At other times X-ray treatment may be resorted to in an effort to establish a diagnosis. The non-osteogenic group of tumors shows a remarkable disappearance of the mass following such therapy, whereas the osteogenic tumors change very little in the picture they present. In any case, it is only by the combined knowledge, obtained from all the avenues of investigation suggested, that a definite diagnosis can be made. In every case of malignant bone tumor, the possibility of metastatic lesions from the primary growth should be considered. We routinely make an X-ray of the chest as well as doing a careful general examination in an attempt to establish this possibility.

TREATMENT

The treatment of primary malignant tumors of bone consists of first, surgery, either local excision or amputation, preferably above a joint proximal to the tumor; second, irradiation therapy, including radium or X-ray, locally or in the case of the latter, systemically; third, a combination of surgery and irradiation, and, fourth, other methods of treatment, including Coley's serum. Undoubtedly earlier diagnosis followed by proper treatment would effect a higher percentage of cures in this comparatively rare, but highly malignant group of tumors.

DISCUSSION

Orville Miller: I quite agree with Dr. Ewing that it is a difficult thing to make a definite diagnosis in many cases of primary tumor of the bone. Like him, I have had the experience of having patients come for treatment in which an X-ray diagnosis was made of osteomyelitis, only to find it was a malignancy. I agree with him that a biopsy should be done wherever there is a question in anyone's mind whether or not malignancy is present. I fear the taking a specimen because I fear the dissemination of the process. For sometime I have been using a tourniquet. I don't know whether it is of particular benefit but I think it safer. I feel

there is a definite way of doing a biopsy which is of value to the surgeon because it is of greater value to the laboratory man. If, in this section, you take only a portion of the bone from the tumor that presents first, you may not get a correct report because he may not have the tissue that is most valuable to him. I feel a complete transverse section is best. A splendid way to do this is with a punch. It is introduced through a small incision, and driven into the medullary canal to obtain a complete transverse section of the cortex. Present this to the laboratory man for his diagnosis.

We have found our greatest successes have followed radical surgery. In my own personal experience I have had no success with Coley's fluid in primary bone tumors. We have found X-ray radiation and radium proved of no value in our patients. So, early diagnosis and radical surgery are the most dependable to be applied in this type of case, in our experience.

Harry Goldberg: After listening to Dr. EWING's paper, one comes to the conclusion that a more uniform classification of these primary malignant tumors of bone will be possible only with a better understanding and correlation of the clinical, roentgenological and the pathologic picture. Since we have become tumor conscious, resort to biopsy is more frequently being made where there is doubt in the diagnosis. The time has come when one should no longer be content with making a diagnosis of a benign or malignant lesion, but one should attempt to determine the type of the malignant lesion, as the treatment and prognosis vary with the histologic picture. It is well to bear in mind that these lesions have certain sites of predilection in areas of most rapidity of growth, as the upper end of the tibia and humerus and the lower end of the femur. Also the fact that these tumors metastasize most commonly to the lungs, no operation should be considered until a careful clinical and X-ray study of the lungs has been made. Since lues may at times simulate a primary malignant tumor of bone, it is advisable to have a Wassermann test made, and even at times a preliminary period of anti-luetic treatment may be necessary. There seems to be a definite relationship between normal bone development and tumor formation, in which there is an apparent loss of growth restraint in these tumor cells. The various types of osteogenic sarcoma seem to be associated with the different phases of osteogenesis. The primary chondromyxosarcoma and the sclerosing osteogenic sarcoma appears associated with the perichondrium or periosteum, and in the early stages are found subperiosteally on the metaphyseal side of the epiphysis. The osteolytic types of sarcoma, as the Chondroblastic sarcoma and the Osteolytic osteogenic sarcoma appear as-

sociated with the stage of regression by osteoclasts in bone development, and in the early stages are found most frequently on either side of the epiphysis. The primary chondromyxosarcoma seems to arise periosteally in regions where tendons insert directly into bone. The sclerosing type appears periosteally in the metaphysis and is most frequently correctly diagnosed. The chondroblastic sarcoma may simulate a giant cell tumor, but extends along both sides of the epiphyseal line and invades the shaft accompanied by periosteal reaction. The osteolytic type arises subcortically in the metaphysis and rapidly invades the cancellous bone and medullary spaces, so that in cases seen late the epiphysis and the shaft are involved. Pathological fractures are commonly seen in this type.

NEWS ITEMS

The Woman's Medical College of Pennsylvania which has had many women graduates in Kentucky, celebrated its 89th birthday on March 11th. The first women physicians to become members of the State Medical Society of Kentucky were Drs. Ingram and Lawrence. It was the first institution in America that trained medical missionaries for the East.

Dr. Leo Bloch has been elected President of the Jewish Hospital medical and surgical staff, with Dr. Karl N. Victor vice-president and Dr. Margaret Hatfield, secretary.

Dr. Samuel T. Jarvis, Woodbine died in March. Dr. Jarvis was the only physician in this lively little community and will be greatly deplored by the citizens.

The Kiwanis Clubs of Kentucky have adopted the membership campaign of the Women's Field Army of the American Society for the Control of Cancer, as one of their major projects. At the opening of the campaign in Louisville, Drs. Frances Massie, Lexington, Wallace Frank and J. Duffy Hancock, Louisville, were present at the Kiwanis Luncheon on March 29th.

Dr. William Hallock Park, 75, Director Emeritus of the Bureau of Laboratories of the New York City Health Department died April 6. Dr. Park will be remembered and thanked by the profession for his pioneer work in diphtheria.

Dr. W. F. Asbury who has been practicing at Campbellsburg for a number of years has moved to Carlisle, where he will continue in the practice of his profession.

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NEXT MEETING: BOWLING GREEN
SEPTEMBER 11-14, 1939

EDITORIALS

REMINISCENCES OF BOWLING GREEN MEETINGS

The first meeting in Bowling Green of the Kentucky State Medical Association occurred in 1870, five years after the close of the War Between the States. Dr. Henry M. Skillman, Lexington, the then President, was unable to attend because of serious illness. The Senior Vice-President, Dr. William A. Atchison, Bowling Green, presided in his place. Dr. Atchison was made President-Elect at that meeting and presided at the sessions of the Association at Covington the following year.

Those present were: Drs. J. M. Bodine, R. H. Singleton, E. R. Palmer, Wiley Rogers, Coleman Rogers, P. W. Logan, Samuel Craig, J. Hale, H. Brown, D. N. Porter, J. F. McElroy, R. W. Dunlap, A. R. McKee, W. E. Daily, L. C. Porter, Geo. McRoberts, S. P. Breckinridge, W. O. Bullock, T. P. Satterwhite and M. E. Poynter.

The next meeting of the Association in Bowling Green occurred in 1884, with Dr. J. N. McCormack, Bowling Green, as President, and Dr. Samuel M. Letcher, as Secretary. Dr. McCormack was just then beginning his public health work, which later made him a national figure.

The third meeting of the Association in Bowling Green was in 1913. The sessions of this meeting were held in the First Christian Church, with Dr. William O. Roberts, Louisville, as President, and Dr. A. T. McCormack as Secretary. The annual address at this meeting was delivered by Dr. Olin West, now Secretary of the American Medical Association, and Dr. V. P. Gibney, New York City, discussed "Diagnosis and Treatment of Knee Lesions in Adults."

The entertainment features of this meeting included a barbecue at Beech Bend and a picnic in Reservoir Park, at which old fashioned country hams from Elk Grove, Hopkinsville, constituted the piece de resistance.

The 1930 meeting of the Association was held at Western State Teachers College and was probably the best attended of any preceding meeting, outside of Louisville, in the history of the organization. College Heights, was particularly beautiful at that season of the year, early in September, and the long porticoes facing the dining room were used for the social gatherings of the physicians. In the opinion of the writer, no other meeting of the Association was ever more generally enjoyed by the members of the profession.

THE ANNUAL MEETING

The Annual Meeting of the Kentucky State Medical Association in Bowling Green early in September, offers an opportunity to the physicians of the State to enjoy a delightful vacation and, at the same time, obtain a profitable postgraduate course in their respective medical specialties. Kentucky is always at its best at that season of the year. The Warren County Medical Society already has plans well under way for entertaining visitors in a manner characteristic of the traditional hospitality of the State as a whole and of that section in particular. It is hoped that physicians throughout the State will at once begin to make arrangements to attend, bringing their families with them. Ample accommodations for everybody will be available at the Western State Teachers College.

TRAPPING A TRICKY VILLAIN

Dr. Kendall Emmerson, of the National Tuberculosis Association, recently referred to the tubercle germ as "A Tricky Villain". When the tubercle germ takes on a role of villain in the drama of life, the plot calls for two leading actors—the patient and the physician. Whether the play turns out to be melodrama or tragedy depends upon both actors. A happy ending hinges on uncovering the prowling villain early in his career. Delay spells disaster, and the lights burn dim as the curtain falls. The patient, though taking a leading part, is without experience and may be excused if he forgets his lines. On the other hand, the doctor is a seasoned veteran and his slips may be difficult to explain.

The physician naturally assumes the role of detective in this drama of life, and it is upon him we must depend in a large measure, if we succeed in trapping the tubercle germ and saving the great army of unfortunate victims doomed to tuberculosis deaths from year to year.

Tuberculosis can be prevented; early tuberculosis can be cured; and even far advanced cases can be helped by the application of modern methods known to every physician today. The startling fact that 8 out of every 10 patients who enter the sanatoria today are advanced cases should stimulate every physician in searching out this villainous tubercle germ and finding its victim when they can be cured.

The National Tuberculosis Association, working through State and local associations, and cooperating with State and local health departments, has designated the month of

April as a time for everyone to give special attention to finding tuberculosis early. Every doctor is urged to join forces against this tricky villain and help make Kentucky a safer place in which to live.

L. E. SMITH,

Executive Secretary, Kentucky Tuberculosis Association, Louisville.

THE SCIENTIFIC EXHIBITS

The Scientific Exhibits, which have always been a valuable part of the State Medical meeting, have this year been placed under the direction of Dr. Virgil E. Simpson of Louisville. Any doctors who have been working on problems which can be presented in the form of an exhibit or demonstration should communicate with him at once. Those who know Dr. Simpson will realize that his selection as chairman of this committee will assure scientific exhibits which will be worth the careful attention of all who attend the meeting at Bowling Green, September 11-14.

Division of the program into a medical and surgical section, as announced in the last issue of the Journal, was given consideration, but it has been decided to continue as in former years with general sessions covering all phases of medical practice. The details of the program are being worked out by the committee of which Dr. Charles N. Kavanaugh of Lexington is chairman. The indications are that in the variety of subject matter and high quality of the presentations this year's program should well repay those who plan to go to Bowling Green. It is hoped that a large representation of the practitioners of the state have already reserved the second week of September.

FAMINE DIET

Many communities this year are emphasizing the importance of good nutrition in developing their May Day Child Health programs. It is interesting to note that the League of Nations' Technical Committee on Nutrition has been studying the question of minimum diet for victims of war and famine. It is sincerely hoped that this country will never be compelled to adopt such a diet, but in view of the widespread malnutrition among our people, this subject is well worth careful consideration.

The minimum diet on which grown-ups (children in proportion) can exist, in reasonable health, consists of eighteen ounces of whole wheat, two-fifths of an ounce of salt, two-fifths of an ounce of Brewer's dried yeast, and one-twelfth of an ounce of cod

liver oil. Twice a week, this should be augmented by the juice of one-half lemon. The experts who have worked out this diet in great detail suggest the use of citrus fruits, and, of course, fresh vegetables may be added if available. In this country the fact should not be overlooked that the potato, including its skin, contains all the elements of life except fats, if eaten in large quantities. The unfortunate victims of war and famine may get necessary vitamins from the leaves of bushes and trees, and wild greens that are along every wayside. If supplies of dried skimmed milk powder are available, a little of this material, added to the just-off starvation diet, should keep those who have to live on it in somewhat better physical condition.

NEWS ITEMS

The next annual meeting of the American Association for the Study of Goitre will be held in Cincinnati, Ohio, May 22, 23 and 24th. The program for this three day meeting will consist of papers dealing with goitre and other diseases of the thyroid gland, dry clinics conducted by guests of the Association, and operative clinics in the various hospitals in Cincinnati. Further information will be given by W. Blair Mosser, M. D. Corresponding Secretary, Kane, Pa.

The Fourteenth Scientific Sessions of the American Heart Association will be held at the Hotel Jefferson, St. Louis, Missouri. The general cardiac program will be given on Friday, May 12, and the program of the Section for the study of the Peripheral Circulation on Saturday, May 13. Members of the Association interested in this subject are cordially invited to attend.

Dr. E. E. Bickers of Eminence, President of the Fifth District Medical Society and former President of the Henry County Board of Health, died at the Deaconess Hospital in Louisville, on March 14, 1939. He was born in Owen County in 1872 and practiced medicine in Grant, Gallatin and Henry Counties.

The Third District Medical Society met Wednesday, March 15, at the Helm Hotel, Bowling Green. E. L. Henderson, Louisville, read a paper on Hysterectomy. O. A. Beatty, Glasgow read a paper on Ambulatory Bilateral Pneumothorax.

Dr. J. H. Hester, announces that he is limiting his practice to Ophthalmology, Hours 9 to 1 and by appointment, 629 South First Street, Louisville.

COUNTY SOCIETY REPORT

Licking Valley: The Licking Valley Medical Society held its first meeting of 1939 in Dry Ridge at the High School Auditorium.

Meeting was called to order by the new president, Dr. McMurtry. The program was started by a paper on "Prostatism", given by Dr. Morman. This paper was a full discussion of the conservative and surgical treatments of the prostate. Following this paper the meeting was temporarily adjourned for a lunch given by the local P. T. A. Association in the Baptist Church. After lunch the meeting reconvened and a short business meeting held. It was decided that in the future only members of the various County Societies were to be considered eligible for membership in the Licking Valley Society.

A call for society dues for 1939 was made and twenty-one responded by paying one dollar each.

A suggestion as to the program for the June meeting was made, which is as follows: that (1) There be three topics—Medicine, Pediatrics and Ear, Nose and Throat; (2) Each paper be limited to fifteen or twenty minutes; (3) And a full discussion follow each paper.

The following are paid up members for 1939. Doctors Rouse, Humpert, Bach, W. B. Moore, Ed Northcutt, Joe Northcutt, Marshall Kinsey, L. C. Hafer, Heisel, J. P. Wyles, McMurty, Herman, Haley, Yelton, Dawson, Huston, Blades, H. Caldwell and Paul E. Harper.

A bill of ten dollars and fourteen cents for envelopes, stamps and printing was presented and ordered paid. Dr. Bach turned over \$51.86 as proceeds left from 1938. \$49.00 was deposited to the above account as proceeds from the dinner and yearly dues. A check of \$50.00 was given the P. T. A. for the lunch served to the society.

W. E. Gardner, of Louisville, gave a case report of his own on "Dementia Praecox" with the history, treatment and results. This paper was followed by one given by W. J. Martin, of Louisville on "Rectal Diseases." Dr. Martin gave slides, illustrating his paper. P. E. Blackerby, of Louisville, brought along and demonstrated an inexpensive incubator and an oxygen tent, which are to be made available at the various County Health Offices. It is hoped that the doctors will use them in their work, when needed.

The next topic was given by Dr. Austin Bloch of Louisville on "Influenza." This paper was very timely and was followed by most energetic discussion of all.

Dr. Blades, of Butler, invited the society to hold the June meeting in Butler. This invitation was promptly accepted.

Meeting adjourned.

PAUL E. HARPER, Secretary, Treasurer

Fulton: The Fulton County Medical Society held its regular meeting on the evening of March 30th. The following program was carried out. Ruptured Appendix, by Dr. Harold Avent, Memphis, Tenn; Foreign Bodies in Trachea, Esophagus and Bronchi, by Dr. Likely Simpson, Memphis, Tenn.

J. C. MORRISON, Secretary

Jefferson: Jefferson County Medical Society May Program consists of the following:

May 1: Refresher Course in Hematology. The Pathogenesis of Anemia:

Anemia as a Problem for the Gynecologist and Obstetrician. Harold Gordon, M. D., Univ. of Louisville, Dept. of Pathology.

Hydronephrosis. (with lantern slides.) Lytle Atherton, M. D.

Sulfanilamide, Its Value in Infection of the Eye, Ear, Nose, and Throat, W. R. Pryor, M. D.

May 15: Refresher Course in Hematology. The Pathogenesis of Anemia:

Anemia as a Problem for the Pediatrician. Harold Gordon, M. D., Dept. of Pathology, University of Louisville.

The Clinical Application of Endocrines in Gynecology and Obstetrics. By Samuel S. Gordon, M. D.

Facial Paralysis—Recent Advances in Surgical Repair, with Case Report. Arthur L. Juers, M. D.

W. B. TROUTMAN

Letcher: The Letcher County Medical Society held its regular monthly meeting and a dinner at the Jenkins Hospital, Jenkins, Kentucky February 28, 1939; Members and visitors present were:

M. D. Garred, Ashland; R. D. Collins, B. C. Bach, Owen Pigman, Carl Pigman, B. F. Wright, A. H. Bond, N. H. Short, A. W. Tankard, A. L. Sparks, E. F. Sheppard, J. E. Stanfill, T. M. Perry, O. F. Kleckner, N. D. Priody and J. E. Johnson.

An excellent dinner was served at the Jenkins Hospital and the staff there had charge of the program. After the dinner the Meeting was called to order by the President, A. L. Sparks; the minutes of the previous meeting were read by the Secretary, J. E. Johnson. M. D. Garred read a most excellent paper on Traumatic Surgery, which was discussed by E. F. Sheppard, Chief Surgeon at the Jenkins Hospital, Jenkins and B. F. Wright, of Seco. Following this, A. L. Sparks, Assistant Surgeon at the Jenkins Hospital gave some interesting reports of cases which he had treated at the Jenkins Hospital, among which was a case of a severe pelvic injury. Dr. Sparks showed the X-ray pictures which were first made when the

patient was taken to the Hospital, later pictures too, followed by the presentation of the patient. The entire Medical Society commented on the excellent results which Dr. Sparks had obtained in treating these cases. The entire program was interesting and the members seemed to enjoy the treat. It was decided that the next meeting would be held in Whitesburg, March 28, 1939 at 8:00 P. M. and that B. C. Bach would be in charge of the program.

J. E. JOHNSON, Secretary

Marion: On March 23, 1939 at 6:30 p. m. the Marion County Medical Society was host at the Tri-County meeting at Lebanon. Following dinner Malcom Thompson, of Louisville delivered a paper on cholecystography and Cholangiography. The talk was illustrated by lantern slides.

J. Murray Kinsman, of Louisville, reported on 40 cases of pneumonia which have been treated with Sulfapyridine.

There were 22 physicians present at the meeting, presided over by Dr. S. C. Clarkson.

W. E. OLDHAM, Secretary

Tri County: The Carlisle, Ballard, Hickman County Medical Society met in joint session at the Bardwell Cafe on March 7th, 6:30 P. M. where a delicious steak dinner was served, and very much enjoyed by all. After dinner the scientific session was held in Dr. Payne's office with the following members present:

Carlisle: Drs. Payne, Dunn, Pease, and Harrel.

Ballard: Drs. Russell, Haas, Page, Tittsworth and Arthur.

Hickman: Drs. Russell, Hass, Page, Titts-Crume D. D. S. (Honorary)

The minutes of the last meeting held in Wickliffe last December were read and approved.

Layson Swann, Clinton, read a paper on "Intestinal Disorders of Infancy" that was very interesting and was freely discussed by Drs. Haas, Moss, Dunn, Arthur, Payne and closed by Dr. Swann.

F. H. Russell, Wickliffe, read a paper on "Abortions" that was discussed by all present and much good was gotten therefrom.

The next regular meeting will be held in Clinton, on the 1st Tuesday in June with Drs. Tittsworth and Harrel leading the scientific discussions.

The Society has lost a very faithful member in the person of R. C. Burrows, Cunningham. Dr. Burrows died Feb. 3, 1939 of a short illness of pneumonia.

E. E. SMITH, Secretary

Jefferson: The following resolutions of the Jefferson County Medical Society were passed upon the death of Dr. C. G. Forsee:

Whereas: In the immutable plan of God's universe, man's earthly toils must cease; and

Whereas: It pleased Him to take from our midst Thursday, the 2nd of March, Doctor Chalton G. Forsee, a fellow of this Society; a physician of prominence, professional activity, community interest and a devoted family head and father of a physician; and

Whereas: This Society desires to express its sympathy to the bereaved family; to the saddened community and to memorialize its own loss; therefore be it—

Resolved—That a copy of these resolutions be sent to the esteemed family, that a copy be published and that a copy be spread upon the minutes of this Society.

Life is but a loan of God,
Ere we pass beneath the sod;
Earth but stays us from above
Here he saves us by His love.

HENRY M. RUBEL
J. J. WYNN
R. ALEXANDER BATE

Knox: The Knox County Medical Society met Thursday evening March 23, 1939 at 6:30 P. M. at the Blackstone Hotel for its regular quarterly meeting.

The following members and visitors were present: Drs. T. R. Davies, President; B. P. Jones, Vice President; W. Parker Clifton, Secretary-Treasurer; Leslie Logan, J. G. Tye, R. B. Fuls, M. A. Bizzell, James E. Parker, George Corum, Adam Stacy, L. L. Terrell, and W. M. Brown.

P. E. Blackerby of Louisville was present and he gave a very interesting discussion of the National Health Program. At the conclusion of his talk the various members gave their viewpoints on the new health program.

The meeting was adjourned until the 3rd. Thursday evening in June.

W. PARKER CLIFTON, Secretary

Pike: The Pike County Medical Society met Monday evening February 20, at 8:00 P. M. in the County Health Department Offices with the following doctors present: O. P. Hodges, H. Haws, R. S. Johnson, Henry Kaminski, Henry I. Berman, A. G. Osborn, L. A. Wahle, W. C. Gose, S. B. Casebolt, J. C. Preston, W. J. Walters, M. D. Flanary, and H. K. Bailey.

The program was in charge of Dr. R. S. Johnson, Pikeville, who presented a very timely paper on the "Financial and Ethical Aspects of the Practice of Medicine and Surgery." A live-

ly discussion followed which centered around Socialized Medicine and the National Health Program.

Since the last regular meeting of the County Medical Society, death has removed from our midst one of the most prominent physicians in Eastern Kentucky, R. W. Raynor, age 52, who died January 20, 1939, following a short illness of lobar pneumonia. Dr. Raynor was a native of White Haven, Maryland and was graduated from the University of Maryland Medical School in 1908. Following his graduation he interned at the University Hospital, Baltimore, and then did general practice for a time, but returned to Baltimore where he continued his post graduate work in Eye, Ear, Nose and Throat work. Shortly after completion of his postgraduate work he entered the U. S. Public Health Service and served with distinction for a long period of time in the diagnosis and treatment of Trachoma. He established Trachoma Hospitals at Hindman and Pikeville under the supervision of U. S. Public Health Service, and his pioneering efforts while at these institutions will long remain a memorial to him. While stationed at Pikeville, Dr. Raynor was sent on a tour of Trachoma conditions through the midwest, mainly the Indian Reservations, in North and South Dakota. This survey resulted in the establishment of Trachoma Hospitals in the Dakotas. Shortly after his return from this survey he resigned from the Public Health Service to pursue the practice of his specialty and located at Ashland, but soon came back to Pikeville. At the time of his death, Dr. Raynor was associated with the Pikeville Clinic in the practice of his specialty, was president of the Beaver Valley Hospital at Martin, a member of the County Board of Health, and of course, a member of the County Medical Society.

Dr. Raynor won and retained the love and admiration of everyone who knew him and his passing is a great loss to the profession, as well as to the citizens of Eastern Kentucky.

Committee: R. S. Johnson,
W. J. Walters,
H. K. Bailey

The Society adjourned in memory of Dr. Raynor.

H. K. BAILEY, Secretary

Grant: The Grant County Medical Society met at Travelers' Inn March 15, 1939 with Dr. Hyman as host. Those present were Drs. Ellis, Marshall, Davis, Kinsey, Hyman and Harper.

The next meeting in April is to be held in Williamstown at the Court House with Dr. Wallace Frank of Louisville as a speaker on the

subject of "Cancer". This meeting is to be an open public gathering which is sponsored by the local Woman's Club and The Medical Society. It was decided to invite the doctors of Boone County to meet with us at this next joint meeting.

A report of a case of Progressive Muscular Atrophy was given and discussed. This was followed by several other case reports of a similar nature.

Dr. Hyman, the host, entertained those present with some tasty refreshments at the close of the meeting.

Meeting adjourned.

PAUL E. HARPER, Secretary

Letcher: The Letcher County Medical Society held its regular monthly meeting in the Directors' room of the Bank of Whitesburg at 8:00 P. M., March 28th, 1939. The following members were present: A. L. Sparks, E. E. Sheppard, J. E. Johnson, J. E. Stanfill, J. E. Crawford, Bernard Ison, T. R. Collier, B. C. Bach, R. D. Collins, T. M. Radcliffe, N. H. Short, Carl Pigman, and Owen Pigman.

The meeting was called to order by A. L. Sparks, President. Minutes of the last meeting read by J. E. Johnson, and approved by the Society. Dr. Johnson read a letter from Dr. Bailey concerning a meeting to be held in Pikeville, April 18th. He then read a list of the paid-up members, and presented membership cards. Dr. Collins suggested that the names of the members present at the meetings of the Society be placed in the Neon News and Mountain Eagle.

A discussion then followed concerning getting speakers for the Tri-County Medical Meeting, and the possibilities of holding such a meeting. Dr. Stanfill suggested sending out cards or letters explaining why the Society wanted to get the Doctors to come, and after seeing the replies, he felt the Society would be justified in having the meeting.

Dr. Sparks turned the meeting over to Dr. Bach who had charge of the program. The first speaker of the evening was Dr. Morgan, Eye, Ear, Nose and Throat specialist from Hazard, who spoke on "Nocular Injuries."

The next speaker was Dr. N. H. Short, Eye, Ear, Nose and Throat specialist from Norton, Virginia, who gave an interesting talk on the "Passing of the Old-Time Doctor".

Dr. Collins remarked that he knew personally that he and the other members of the Society appreciated the two speakers of the evening. He also said "I have known Dr. Morgan for quite a while. Dr. Short has been a member of this society since 1930, and every year since. He comes to Jenkins bi-weekly and has done much for us and our school children. Dr. Short, you gave a splendid graphic illustration of the "old-time Doctor" and brought back to us the

"horse and buggy days." I move that the members of this Society give a standing vote of thanks to the two speakers for coming here tonight."

Dr. Collins' motion was seconded, and the members gave a standing vote of thanks to Dr. Short and Dr. Morgan. It was announced by Dr. Bach that refreshments would be served at the home of Dr. Collier after the meeting.

Motion was made and seconded to adjourn.

J. E. JOHNSON, Secretary

Calloway: The regular monthly dinner meeting of the Calloway County Medical Society was held in the dining room of the National Hotel at seven P. M. on March 9th, 1939. The following members were present.

Rob Mason, President; Hal E. Houston, C. H. Jones, C. J. McDevitt, E. D. Fisher, J. A. Outland, Will Mason, E. W. Garrett, Katherine Fisher, L. D. Hale, Hugh L. Houston.

The members absent were:

P. A. Hart, A. D. Butterworth, Ora K. Mason, J. V. Starks, Kirksey; E. D. Miller, Hazel.

The program consisted of the following papers, "A preliminary report on a case of Berger's disease" by Dr. Edison D. Fisher.

"Two cases of diabetes mellitus with serious complications" by Dr. Coleman J. McDevitt.

The papers were enjoyed by all and discussion was liberal by members of the society.

A committee was appointed by Dr. Rob Mason, president, authorized to draw up a schedule price for Calloway County. The committee consisted of the following: Hal E. Houston, L. D. Hale, Will Mason.

The committee is to bring before the next meeting of April 13, a fair scale price for this locality. The program committee was requested to make out an early program so that the ones responsible for the meeting could render a worthwhile program.

Motion for adjournment was made by Dr. J. A. Outland, seconded and voted unanimously.

HUGH L. HOUSTON, Secretary.

Boyd: The Boyd County Society held its regular monthly dinner meeting in the Coral room of the Henry Clay Hotel Feb. 7. At that time, Walter E. Vest of Huntington, W. Va. addressed the Society on proposed legislation relative to compulsory health insurance. Dr. Vest is president of the Southern Medical Association, and a member of the committee of seven of the A. M. A. which has been working on the problem of socialized medicine. His address provoked a great deal of interesting discussion.

At the regular meeting March 7, Clifford C. Woods of Ashland delivered an address on "The Etiology of Gynecological Surgery," urging more conservative obstetrical and surgical practices. Both meetings were well attended.

HUBERT J. RICHARD, Secretary

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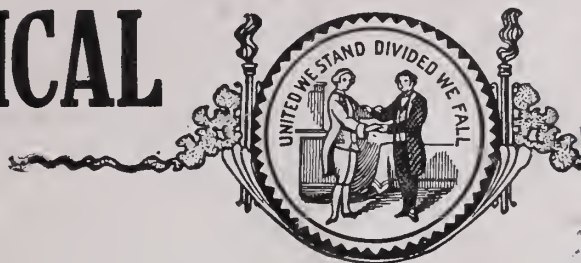
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BOWLING GREEN, KY.

JUNE, 1939

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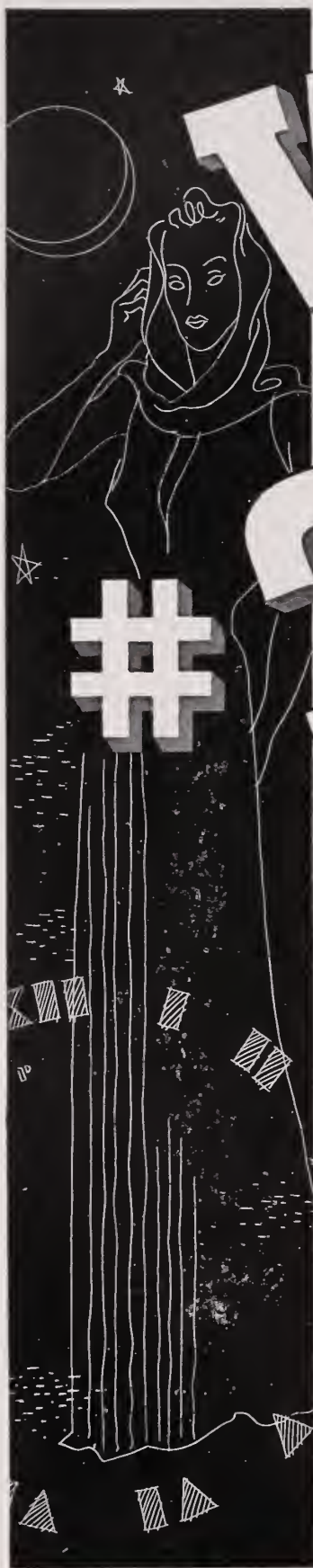
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*Further Clinical Observations on Feeding Infants Whole Milk, Gelatinized Milk, and Acidified Milk. C. Loring Joslin, M.D., F.A.A.P.; Bulletin of the School of Medicine, University of Maryland; Jan. 1939.

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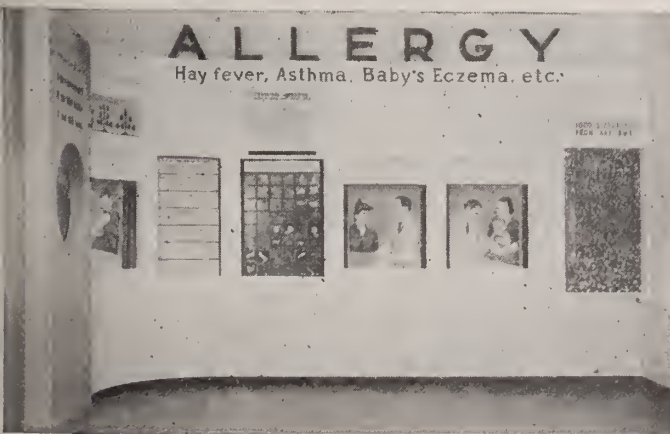
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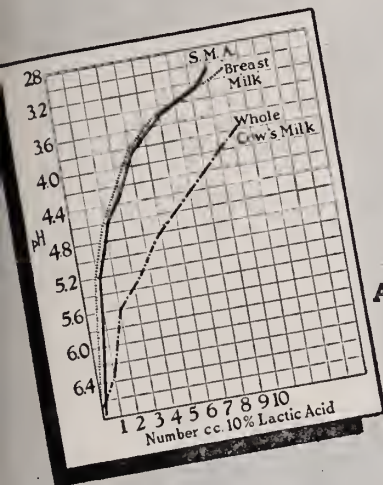
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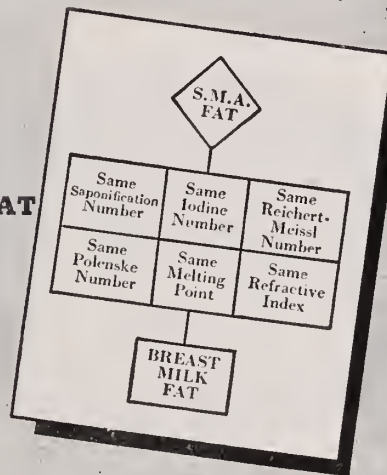
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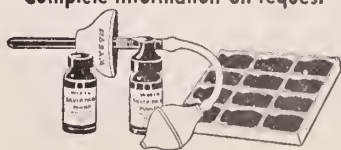
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COUNTY	SECRETARY	RESIDENCE	DATE
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Allen	A. O. Miller	Scottsville	June 28
Anderson	J. B. Lyen	Lawrenceburg	June 5
Ballard	F. H. Russell	Wickliffe	June 13
Barren	Rex Hays	Glasgow	June 21
Bath	H. S. Gilmore	Owingsville	June 12
Bell	E. S. Wilson	Pineville	June 9
Boone	R. E. Ryle	Walton	June 21
Bourbon	Eugene L. D. Blake	Paris	June 15
Boyd	Hubert J. Pritchard	Catlettsburg	June 6
Boyle	P. O. Sanders	Danville	June 20
Bracken-Pendleton	W. A. McKenney	Falmouth	June 22
Breathitt	Philip Bress	Jackson	June 20
Breckenridge	J. E. Kincheloe	Hardinsburg	June 8
Bullitt	G. F. Brockman	Shepherdsville	
Butler	G. E. Embry	Morgantown	June 7
Caldwell	W. L. Cash	Princeton	June 6
Calloway	Hugh L. Houston	Murray	June 8
Campbell-Kenton	Joseph H. Humpert	Covington	
Carlisle	E. E. Smith	Bardwell	June 6
Carroll	J. M. Ryan	Carrollton	
Carter	Don E. Wilder	Grayson	June 13
Casey	William J. Sweeney	Liberty	June 22
Christian	D. M. Clardy	Hopkinsville	June 20
Clark	R. E. Strode	Winchester	June 16
Clay	J. L. Anderson	Manchester	June 13
Clinton	S. F. Stephenson	Albany	June 17
Crittenden	C. G. Moreland	Marion	June 12
Cumberland	W. F. Owsley	Burkesville	June 7
Daviess	James E. Hix	Owensboro	June 13 & 27
Elliott	Virginia Wallace	Irvine	June 14
Estill	D. E. Scott	Lexington	June 13
Fayette	Roy Orsburn	Flemingsburg	June 14
Fleming	J. G. Archer	Prestonsburg	June 28
Floyd	Grace R. Snyder	Frankfort	June 1
Franklin	J. C. Morrison	Fulton	June 14
Fulton	J. M. Stallard	Sparta	June 15
Gallatin	J. E. Edwards	Lancaster	June 15
Garrard	Paul E. Harper	Dry Ridge	June 21
Grant	H. H. Hunt	Mayfield	June 6
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Grayson	S. J. Simmons	Greensburg	June 5
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Greenup	F. M. Griffin	Hawesville	June 5
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Harlan	W. B. Moore	Cynthiana	June 5
Harrison	S. F. Richardson	Munfordville	June 6
Hart	J. Leland Tanner	Henderson	June 12 & 26
Henderson	Owen Carroll	New Castle	June 1
Henry	Layson B. Swann	Clinton	June 1
Hickman	David L. Salmon	Madisonville	June 1
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Metcalfe	E. S. Dunham	Edmonton	June 6
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VOL. 37, No. 6

BOWLING GREEN, KY.

JUNE, 1939

ORIGINAL ARTICLES

WHAT HAS HAPPENED TO MASSAGE?*

FOLKE BECKER, A. B., M. D.,
Harrodsburg

The use of physical agents in the treatment of diseased conditions is as old as man himself. The first primitive man to rub his bruises and sprains unwittingly became our first masseur.

Biorkman (4) reminds us that "The Egyptians, Persians, and above all the ancient Greeks, Herodikos and Hippocrates, left behind them prescriptions for massage and exercises."

Per Henrik Ling, of Sweden, at the beginning of the last century, founded the Central Gymnastic Institute of Stockholm and evolved the system of massage and remedial exercises upon which our modern practise of Physiotherapy is based. The "Lingiad" is a world gymnastic festival to be held this year at Stockholm in honor of Ling, poet and "father of Swedish gymnastics." This celebration will mark the one hundredth anniversary of his death and will be heralded by a series of commemorative stamps in his honor.

It is a sad fact that for massage, which is one of the oldest and most reliable of all remedies where indicated, other and greatly inferior forms of treatment have been substituted. Pemberton, Coulter and Mock point out that "there is probably no other measure of equal known value in the entire armamentarium of medicine which is so inadequately understood and utilized by the profession as a whole." They (1) write that "Hippocrates, about 430 B. C., in discussing the treatment of dislocated shoulder, following reduction, said: 'And it is necessary to rub the shoulder gently and smoothly. The physician must be experienced in a great many things, but assuredly also in rubbing; for things that have the same name have not the same effects. For rubbing can bind a joint which is too loose and loosen a joint that is too hard.'" It goes without saying that Hippocrates did not refer

to the type of "rubbing" given in so-called health institutes, reducing parlors and bath establishments, but to manipulations based upon scientific principles and administered by an operator who knows his work and, above all, knows what he should not do. More harm can be done by faultily administered or ill-advised massage than by any other physical modality. There are so many inefficient masseurs that, naturally, many doctors have an erroneous conception of the effects of real massage. A "good" masseur is often thought to be one who gives the hardest treatment. This view is absolutely incorrect and it is important to bear in mind that almost diametrically opposite effects may be obtained in giving massage. For example, sustained vibration between the Scapulae may be used to slow the pulse in the tachycardias, but the opposite effect is obtained when tapotement is used in the same place. The effect of massage is entirely in accordance with the way in which it is applied. It may be sedative, or stimulating, or even irritating, depending upon how it is administered and the kind of manipulation employed.

The average physician is too busy or is technically not qualified to personally give massage. Doctors who have made a close enough study of the subject to enable them to give definite directions to a technician are still too few, and the physician as a rule prescribes just "massage," leaving it to the technician to decide the type of massage to be given. He thereby gives the masseur little aid and leaves to that individual a medical decision which should be strictly the responsibility of the physician. It behooves him, therefore, to familiarize himself with the various massage manipulations and the effects produced by them. Grober (3) states, "should inclination or lack of training prevent the physician from rendering this service (massage) then it is his bounden duty to prescribe in detail when the occasion for massage arises."

Definition of Massage

Massage is the systematic manipulation of the body tissues by the hands of an operator familiar with the anatomy of the part.

*Read before the Mercer County Medical Society, March 14, 1939.

Massage Manipulations

The five fundamental massage manipulations may be listed as follows:

1. Effleurage
2. Petrissage
3. Friction
4. Tapotement
 - (a) hacking
 - (b) clapping or cupping
 - (c) tapping
 - (d) slapping
 - (e) beating

5. Vibration

Effleurage consists of slow, gentle, rhythmic and uni-directional surface strokings, and is divided into superficial and deep effleurage. Superficial effleurage produces reflex dilatation of the peripheral capillaries and has a sedative effect. The direction of its stroke is not important. In deep effleurage, however, the stroke is always in the direction of the venous flow, and is designed to press out the contents of the veins and lymphatics in the direction of their natural flow.

Petrissage consists of kneading and compressing movements of varying intensity and amplitude. It is designed to assist venous and lymphatic circulation, hasten the removal of waste products from the muscles, stretch retracted muscles and tendons and aid in stretching adhesions.

Friction consists of deep circular rolling movements done with one or two fingers or a part of the hand closely applied to a fixed point on the skin, the movements being of prescribed intensity and amplitude. It is designed to free adherent skin, loosen scars and adhesions of the deeper parts and aid in the absorption of local effusion.

Tapotement consists of percussion movements of prescribed frequency and intensity.

(a) Hacking is performed with both wrists relaxed and the hands held transversely across the part to be treated in such a way that the Ulnar surface of the relaxed hands delivers the impact. The little finger strikes first and the other three fingers produce contact in rapid succession. The motion is chiefly at the wrists.

(b) Clapping or cupping is similar to hacking except that the Palmar surface of the cupped hands is applied in rapid alternation to the part to be treated.

(c) Tapping is performed with the tips of the fingers in rapid alternation.

(d) Slapping is similar to clapping or cupping except that the flat Palmar surfaces of

the hands are applied to the surface being treated.

(e) Beating is performed in a similar manner except that here the part is struck with the relaxed, half-clenched fist so that percussion is made with the knuckles.

The immediate effect of percussion is a blanching of the skin due to reflex contraction of the arterioles. This is soon followed by redness due to paralytic dilatation of these vessels. Percussion is also said to have a stimulating effect on muscles.

Vibration consists of vibratory movements imparted through the operator's fingers or hands by contractions of his arm and shoulder muscles. It is a difficult technique to master and very tiring to the unskilled operator. This form of massage is not used nearly enough by the average masseur, for the reason given. However, in the course of time, it does not tire a skilled operator any more than it tires a skilled violinist to play the violin for hours at a time. Short vibrations produce stimulation. Prolonged vibration produces inhibition. Vibration is said to stimulate glandular and nerve activity when of short duration and to produce the opposite effect when prolonged. Dr. Arnold Snow (5) has gone into the subject of vibration in a practical treatise of two hundred and ninety-seven pages.

Practical Rules for Massage Treatments

McMillan (6) proposes a set of "Golden Rules" for massage, as follows:

1. See that the patient is in as comfortable a position as possible, and that the operator is in the best position to do the work.

2. Always support the part that is being massaged.

3. The operator's muscles should be relaxed, as well as those of the patient.

4. The clothing of the operator should allow of perfect freedom and ease of movement; no sleeve should be worn below the elbow.

5. All procedures should be started moderately, increasing both in force and frequency, and should end gradually, as started.

6. Petrissage should be performed with the whole Palmar surface of the hand and not with the finger tips, except where finger-and-thumb petrissage is required to pick up individual muscles or smaller muscle groups.

General indications and contra-indications for massage, summarized from Stewart (7) and Granger (8) are as herewith listed:

Indications for Massage

1. Muscular atrophy from any cause.
2. To increase metabolism.

3. To lessen scar tissue and callous formation.
4. To assist venous and lymphatic circulation.
5. For sedation and stimulation of sensory nerves.
6. To improve skin tone and function.
7. To improve nutrition.
8. To break down adhesions and limit their formation.

Contra-indications for Massage

1. Swellings which might be malignant.
2. Acute deep inflammatory processes.
3. Acute skin infections.
4. Acute febrile diseases (except mild effleurage).
5. Acute phlebitis and thrombosis.
6. Lymphangitis.
7. Osteomyelitis, without drainage.
8. Gastric or duodenal ulcer.
9. Large hernias.
10. Tuberculous joints.

It has been shown that exercise, however slight, produces metabolic changes that do not occur with massage. Metabolic changes as a direct result of massage have not yet been conclusively demonstrated, but massage is an aid to metabolism in general through the removal of metabolic end products and through hastening their absorption, excretion and re-utilization. Lactic acid is produced in the muscles and the pH of the blood is altered by exercise, but not by massage.

Over fifty years ago, Kleen of Sweden observed the improvement in the blood picture following abdominal massage. This phenomenon has been observed by others from time to time and is thought to be due to a liberation of erythrocytes which were stagnated in the capillary networks of the body, and expressed by massage into the general circulation.

Special Considerations

A popular misconception prevails to the effect that massage will reduce weight. Physical injury has often resulted in obese persons anxious to "massage off" their extra poundage. Massage will not reduce real weight despite the protestations of our reducing parlors and gymnasia, many of which manage to work in a little dietetics and active exercise on the side. The weight loss through massage is principally a fluid loss, through improved elimination, and is quickly replaced in the absence of other measures. Much of the fluid loss in these "reducing treatments" is due to the application of various forms of heat and exercise and is not a result of the massage. Lautman (2) states,

"No massage will reduce real weight." Many others concur in this belief.

In no field of medicine can massage and exercise be used to greater advantage than in Orthopedics. Massage will not of itself heal fractures or torn fibers. Neither will it restore the power of a muscle or nerve involved in the paralytic diseases. What it will do, however, is aid in restoring the circulation of blood and lymph in and about the injured or paralyzed parts, on which restoration the repair of tissue and the maintenance of normal metabolism largely depends. Massage alone has very little value in the latter group of cases unless proper exercises and supports are employed. Splinting is often necessary to prevent contraction of healthy muscle groups with resultant overstretching and injury to unprotected paralyzed muscles. In no case should massage be allowed to replace careful and skilled muscle re-education. Massage will improve tone, prevent atrophy through improved circulation and nutrition and hasten repair of injured muscles. Muscle power, however, is increased only by active exercise.

In like vein, it cannot be said that massage and exercises comprise a complete method of treating fractures. Proper reduction and fixation are the prime essentials, with two main objects in view. The first objective is the restoration of the anatomy of the part and the second, which is equally important and occasionally more so, is restoration of function. Neither objective should be obtained at the expense of the other.

It has been said that much of the after-treatment of sprains, dislocations and fractures in the past has been concerned with overcoming the effects of prolonged immobilization rather than the effects of the injury itself. Many of the untoward results of prolonged fixation of a normally moving part are preventable. Massage and graded motion should be begun in all cases at the earliest possible moment, but never so early that the anatomy of the part will be disturbed and never so late that functional restoration will be impeded. Naturally, this implies the exercise of considerable judgment and skill in each individual case. Anatomical derangements that are difficult to keep reduced until union is quite firm must wait a longer period before massage and mobilization are under way, than those that tend to maintain the proper anatomical relationships once they are reduced.

In our efforts to find a "specific" remedy for arthritis, we have thus far bogged down

for the reason that arthritis per se is not a disease entity of definite etiology but is a part of a complex chain of events based on varying infectious, metabolic, traumatic, hereditary and other factors which are as yet not clearly correlated.

For centuries, massage has maintained its place in the care of arthritic patients the world over and will be in use, together with its adjuncts of heat and exercise, when most of our present methods will have fallen into disrepute. Massage and graduated exercises are essential in the management of the arthritic patient, regardless of what other modalities may be employed, if circulation is to be maintained and deformity prevented. Hansson (9) states, in speaking of rheumatoid arthritis, "I still have to see the typical finger deformity in an arthritic patient who has had to keep her fingers active during the major part of the day."

Volumes have been and are being written, on medicaments of value in the treatment of arthritis. Today, Colloidal Sulphur is again on the stage. In the light of recent researches, with which I have had the pleasure of being associated, it would appear that we have in Colloidal Sulphur a medicament of distinct value as a detoxifying agent and possibly a source of assimilable sulphur to replace that lost in the arthropathies. If this is so, we have a valuable supplement to our physical measures. Heretofore, no single modality has been without distinct shortcomings in the treatment of the arthritides. Albeit, no single therapeutic agent has stood the test of time as has massage.

Conclusion

Space and time do not permit more than a representative review of the host of conditions in which massage is indicated as the treatment par excellence, or as an adjunct to some other form or forms of therapy. There is little doubt about the value of many Physiotherapy implements, especially when used in conjunction with massage, but, independently, their value is limited and has been greatly exaggerated by clever advertising on the part of the manufacturers. Many of you will find out, if you have not done so already, that a great many things that the salesman said are not quite so. The average physician is too busy to personally give massage treatments to his patients and he needs someone who understands this type of work and in whom he can have confidence. He can, possibly, get along with his own Physiotherapy equipment, but if he is honest with himself and with his patients he cannot

get along without a skillful masseur. The orthopedic specialist cannot get along without some assistant who thoroughly understands how to give corrective exercises and massage. The patient cannot, and should not be allowed to, take such exercise without proper supervision. In orthopedic reconstructive work, massage is absolutely necessary and it is a pity to note that this most important form of Physiotherapy is usually administered by incompetent operators. This is particularly true in industrial and other clinics, including hospitals, where so-called compensation cases are treated. One can hardly blame physicians for assuming an antagonistic attitude toward those self-styled "healers" who diagnose and operate independently, and there is no doubt that all forms of treatment should be prescribed by the legitimate physician, but it is difficult to understand why the average doctor will not avail himself of his important heritage of massage. If he is under the impression that massage is so simple that he does not need to study it, he will be surprised at the complexity of theory and practice involved in its application. As a direct result of our own negligence we are faced with the ridiculous and confusing Physiotherapy situation as it now exists, with the Chiropractic, Osteopathic, Naturopathic and other professions the fond, though poorly trained, foster-parents of this medical orphan. It might fittingly be mentioned here that there is no manipulation or desired effect in Chiropractic or Osteopathy that a well trained masseur cannot accomplish.

In spite of the fact that massage has been practised largely by persons having had little or no medical education, it has survived the test of time and will be in use when many of the present forms of Physiotherapy will be given only in barber-shops, if at all. Massage has been relegated to the background for more convenient but far inferior methods of treatment and is about due for a revival. But, of course, turning on a switch is easier.

BIBLIOGRAPHY

1. Pemberton, R., Coulter, J. S., and Mock, H. E.: "Massage," J.A.M.A., 94:25, June 21, 1930.
2. Lautman, M. F.: Hygeia, 13:218-220, March, 1935.
3. Grober, J.: Medical Record, 140:256, Sept. 5, 1934.
4. Biorkman, C.G.A.: Archives of Physical Therapy, 15:425-428, July, 1934.
5. Snow, M.L.H. Arnold: "Mechanical vibration and its Therapeutic Application," New York Scient, Author's Pub. Co., 1904.
6. McMillan, M.: "Massage and Therapeutic Exercise," 2nd edition, W. B. Saunders Co., Philadelphia, 1929.
7. Stewart, H. E.: "Physiotherapy," Paul B. Hoeber, New York, 1929.
8. Granger, F. B.: "Physical Therapeutic Technique," 2nd edition, W. B. Saunders Co., Philadelphia, 1932.
9. Hansson, K. G.: Med. Clin. of N. America, 21:1817, Nov., 1937.

TESTIMONIAL DINNER

In Honor Of

LOUIS FRANK, M. D.

AND

J. GARLAND SHERRILL, M. D.

The Pendennis Club, in Louisville, was the gathering place on November 11th, 1938, for some two hundred Kentucky physicians, and many from out of the state, at a Testimonial Dinner sponsored by the Louisville Medico-Chirurgical Society and the Louisville Surgical Society in honor of Louis Frank, M. D., F. A. C. S., and J. Garland Sherrill, M. D., F. A. C. S., upon the completion by each of fifty years in the active practice of Surgery in Louisville.

It is rare that two men remain so active in the practice of medicine for fifty years and are so universally respected by their colleagues. Both are Emeritus Professors of Surgery in the University of Louisville School of Medicine. When one thinks of the number of students in Medicine who have sat at the feet of these Gamaliels, the gaiety of the occasion is manifest.

The following represent only a few of the former students and friends of the honored guests, from whom letters and telegrams were received.

W. N. Wishard, Indianapolis; Rudolph Matas, New Orleans; Mont R. Reid, Cincinnati; William Lower, Cleveland; Frank K. Boland, Atlanta; J. M. Mason, Birmingham; Willard Bartlett, St. Louis; Frank H. Lahey, Boston; Lon Grove, Atlanta; R. S. Cathcart, Charleston; W. A. Bryan, Nashville; Thomas S. Cullen, Baltimore; Addison G. Brenizer, Charlotte; Deryl Hart, Durham; Loyal Davis, Chicago; Fredric Besley, Chicago; Dean Lewis, Baltimore; Hubert Royster, Raleigh; Harry H. Kerr, Washington, D. C.; Francis R. Hagner, Washington, D. C.; Isidore Cohn, New Orleans; Stuart McGuire, Richmond; Malcolm T. MacEachern, Chicago; Howard Kelly, Baltimore; George Crile, Cleveland; Curtis F. Burnam, Baltimore; James W. Jameson, Concord; W. D. Haggard, Nashville; Carl Weidner, La Feria; Edward Jelks, Jacksonville; C. C. Howard, Glasgow; Robert E. Brennan, New York; H. Dawson Furniss, New York; Hugh Trout, Roanoke; J. A. Link, Springfield; J. W. Barksdale, Jackson; Floyd McRae, Atlanta; J. Edward Pirrong, Cincinnati; Walter C. G. Kirchner, St. Louis.

The following letter was received from Major General C. R. Reynolds, The Surgeon General of the United States Army, War Department.

This is to acknowledge receipt of the cordial invitation to attend the testimonial dinner in honor of Dr. Louis Frank and Dr. J. Garland Sherrill, on Friday, November 11, at the Pendennis Club, Louisville, Kentucky.

I regret exceedingly that official duties in Washington will prevent my attendance, but wish to have my compliments presented to Doctors Frank and Sherrill that they may know that if I could do so I should be very glad to represent the Medical Department of the Army in expressing its appreciation of the splendid service rendered to medicine and to the military establishment by these two outstanding medical men. Please give them my kindest personal regards.

George A. Hendon was the Toastmaster of the evening and performed in his usual brilliant and inimitable style.

The remarks of the Toastmaster in introducing some of the speakers follow:

P. F. BARBOUR: At whose Gamaliel feet countless hordes of budding Pauls have burst into glorious bloom, and shed their healing rays throughout the length and breadth of this broad land. Subject: "As I Knew Them in the Nineties."

JOHN WALKER MOORE: The guiding star and controlling genius of the Medical Department of Louisville's most priceless possession, its University. In introducing him, may I express the hope that the Fates conspire to preserve his powers undiluted and unimpaired. Subject: "Their Influence in the University of Louisville."

CHARLES A. VANCE: Who brings a greeting from the far flung fields of the Bluegrass, where the fleet-footed fannies foal their future fame amid the tangled prongs of the Elkhorn. Subject: "Greetings from Lexington."

IRVIN ABELL: A man whose achievements in politics and medicine, as well as medical politics, have been equalled by few and surpassed by none. Whose image is a shrine where every medical policy and medical art is honored and respected. To him all of us have reason to be grateful for the Herculean tasks he is now performing in bending every effort of his exalted position to the protection of our professional liberties in this, our present hour of peril. Topic: "Reminiscences."

ARTHUR T. MCCORMACK: Dr. McCormack will speak for himself in no uncertain terms and no equivocal phrases; and when he gets through, if he ever does, those who do not agree with him will have been verbally battered into insensibility and reduced to a shapeless mass of pulp. Dr. McCormack is the real bulwark of professional liberty. It is because of him that the doctors of

this land can still lift their heads in pride and continue to breathe the pure and unpoluted air of freedom. He brings you "Greetings from the State Department of Health."

L. P. Spears of the first graduating class of Kentucky University Medical Department spoke on, "At Kentucky University Medical Department, 1899."

Virgil E. Simpson gave the closing address, "The Road to Professorships," in a most scholarly manner.

THE ROAD TO PROFESSORSHIPS

VIRGIL E. SIMPSON, M. D.

Louisville

The story of Medicine is coexistent with the history of man. Victor Robinson rather picturesquely says, "The first cry of pain through the primitive jungle was the first call for a physician." Born of necessity and conceived in sympathy, Medicine of all the arts was the most natural art. Since its inception antedated the art of printing, its early story is a confusing mixture of myth and reality. The early Medicine Man attempted to veil his art under the cloak of mysticism, for only thus could he maintain his superior status. But soon the teaching of pupils became the order of the day. There are records of systematic teaching of aspiring young men in Mesopotamia of as early a date as 3000 years B. C. The Papyrus Ebers portrays how the early Egyptians practiced as well as taught medicine.

May I invite your interest tonight to but two events in the story of medical teaching? The first began about 460 B. C. at Cos, a little sea-girt island of limestone and wild olives near the coast of Ionia and now called Stan-Co. Here taught and wrote Hippocrates, a scion of a family in which the practice of medicine was hereditary. He embodied the transition from a period of mythology to that of history. The Asklepeion of Cos was in all probability both a hospital and a teaching institute. This group espoused the principle of intuitive comprehension and empiricism; they thought of medicine more as an art than as a science. The rival school at Cnidos challenged this dogma and carried on as theorists. Thus one finds dissensions and rivalry in medical schools of early origin. The school of Cos was the more popular for a time, its position being strengthened through its most illustrious alumnus, Hippocrates. An important feature of the Greek system consisted in the custom of the student gaining much of his knowledge in private instruction from a practicing physician. This was follow-

ed, in principle, in the latter-day "preceptor" custom which was not abandoned in Louisville until about 1892. But the star of medical empire wandered first south before west. The Alexandrian school in Egypt became the center of medical teaching. Here anatomy became the subject of first concern and here, too, specialism had its birth. Then followed the Roman school, which set up medicine as a profession shortly before the birth of Christ. They inaugurated the first step in public health service when Athenaios began to acquaint the public with the nature of medicine through popular writings. In the sterile, torpid centuries that followed, the dominance of Galen was succeeded by the dominance of Galen and errors were uncritically carried through the years. During the Middle Ages, the teaching of medicine was carried on chiefly by the clergy. The single brilliant exception was the School of Salerno, which was authorized by Emperor Frederick II to confer medical degrees on the completion of five years of study and one of practical work. These requirements obtain in much of Europe today. Then came in succession the Schools of Montpellier, Bologna and Padua. Now scholasticism flourished; mysticism, medical astrology, theologic claims, became vocal. What a contrast between the clarity of antiquity and the academic abstractions of the Middle Ages. Welcome, indeed, was the revival of dissection in the 14th century, the dissector pointing out the worthwhile on the cadaver while the professor lectured from his chair.

With a historian's license the next 500 years are allowed to pass in silent review, pausing only to say that teaching in the United States was slow in being inaugurated. One hundred and fifty years passed after the first Colonial settlement before the College of Philadelphia founded what is now the University of Pennsylvania in 1765. To Dr. John Morgan belongs the major credit of this first medical school in the United States. Three years later a second was started in New York City. Then followed Harvard (1782) and Baltimore (1804).

The Transylvania University was started in Lexington, Kentucky, in 1817, the first medical school west of the Allegheny Mountains. Its first class numbered 20 students, of whom the first President of the Kentucky Medical Society, W. R. Sutton, was one. It suspended operation in 1818, but was reorganized in 1819. Following its rebirth it prospered and reached a high record of 232 students in 1825.

The Louisville Medical Institute was char-

tered in 1833 but began operation in 1837. The University of Louisville was created in 1845 and the Institute became the Medical Department of the University of Louisville.

The Kentucky School of Medicine was established in 1850 under the auspices of the Masonic University. This University and the Frank Seminary were located in LaGrange, Kentucky. It suspended operations in 1852 and the Kentucky School of Medicine obtained a charter from the Kentucky legislature for an independent existence. The school used a building at Fifth and Green Streets and its first session began in November, 1850. The announcement stated that the Louisville Marine Hospital would be available for teaching purposes; it further announced that the tuition was \$110.00 for a full course, that two full courses were required for graduation and all graduated were "entitled to a perpetual right of attendance on the lectures."

The Greek system of requiring a student to obtain a part of his instruction under the supervision of a practicing physician was followed in principle in the latter-day "preceptor" custom, which was not discontinued by the Kentucky School of Medicine until 1892. In 1894 the two-year course was changed to three, and in 1896 a fourth year was announced as optional, for which a special certificate was issued with the regular diploma. In 1898 a full four-year course was required.

In 1897 the catalog of the Kentucky School of Medicine was issued with the statement that the school was the Medical Department of the Kentucky University. The University announced that year four colleges and one academy, the College of Liberal Arts, College of the Bible, Kentucky School of Medicine, Commercial College and the Academy. Women were admitted to all but the College of the Bible and the Medical College. The catalog for 1898 of the Kentucky School of Medicine did not carry the caption, "Medical Department, Kentucky University." With the disappearance of this masthead, we have arrived at the birth of the second event of interest to this group and the two teachers being honored tonight.

The Medical Department of the Kentucky University was established in 1898 as the child of the Kentucky School of Medicine, but the paternity was denied. Like the schools of Cos and Cnidos, differences of opinions tugged at the vitals of the old institution as Marvin and Wathen struggled for mastery. Though retaining control of his school, Wathen lost—lost a goodly portion of his faculty, lost the connection with the Kentucky University, lost from a graduating class of

82 in 1897 to one of 23 in 1898, lost the school's individuality through a merger with the University of Louisville that was inaugurated by its disowned offspring. On February 13, 1907, there was written on the minutes of the faculty meeting of the Kentucky University the following portentous entry: "President Marvin appointed Drs. Frank and Sherrill as members of a committee to meet a similar committee of the University of Louisville to discuss plans for merging the two institutions." The Kentucky University merged with the University of Louisville with the beginning of the session of 1907-8. The final chapter of Kentucky University's role in the transaction was announced on September 23, 1909, in the Louisville Herald:

"Stockholders Notice. By common consent of the stockholders of Kentucky University Medical Department, this corporation will wind up its affairs and proceed to liquidate. Claims against the institution must be proposed, proven and presented.

H. E. Tuley, Secretary."

The final meeting of the stockholders of Kentucky University was held December 11, 1909, and formally closed affairs of Kentucky University on motion of Dr. Frank, and officially went out of existence. Its action encouraged by the active interest of the Chancellor of the University of Louisville, John C. Willis, created the vortex into which were drawn in turn the Hospital College, Louisville Medical and the post partem Kentucky School of Medicine. Whether one may believe this combination wrought a better medical school for Louisville or incline to the thought that the Kentucky University might well have become the mater familias is idle conjecture now. That a stronger, better, more useful medical school has risen from the graves of five that had become outmoded cannot be gainsaid.

From 1888 to 1908, a period of two decades, what were Drs. Frank and Sherrill doing in this business of teaching?

Dr. Louis Frank's name first appears in the catalog of the Kentucky School of Medicine for 1892 as Assistant to the Chair of Ophthalmology, Laryngology and Otology and Demonstrator in Bacteriology, and was listed as Chief of Clinic in the College Dispensary. That year the School had 489 matriculates and 187 graduates. In 1894 he was listed as a member of the City Hospital Staff in Clinical Medicine. That year the school graduated 224, with 504 matriculates. Frank became Associate Professor of Obstetrics and Director of Laboratory of Bacteriology in 1895 and was made a member of the Staff of the Kentucky School of Medicine Hospital on Obstetrics and a member of the City Hos-

pital Staff on Gynecology. The Hospital of the Kentucky School was opened this year (1895). I find in this year's catalog the name of Louis Frank on the list of graduates! He was also elected secretary and treasurer of the Alumni Association of the Kentucky School of Medicine. This year he gave a prize on Obstetrics, which was awarded Edward Swann from Alabama. In 1897 he became Professor of Bacteriology and Director of Laboratory of Bacteriology, the first touchdown on the professorial field. He appears again in the catalog for 1898, and then his sun goes down on the Kentucky School of Medicine to rise again in the new school as Professor of Surgery and Gynecology. He continued to teach in this University until it lost its identity and became a part of the faculty of the new University of Louisville, to become Emeritus Professor in 1932.

Dr. Sherrill began his career as a teacher in 1890, also in the Kentucky School of Medicine as Demonstrator of Anatomy. In the catalog of the Louisville Medical College of 1890-91 one also finds the name of this medical pedagog listed as Adjunct Professor of Chemistry. In that same catalog one reads as one of the special honors offered students, "Dr. Sherrill's prize on Practical Chemistry, a gold medal to P. A. Hobbs of Kentucky."

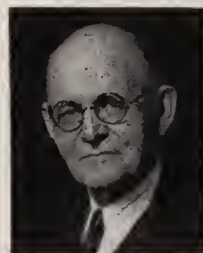
He continued in both schools until 1894, when he gave all of his time to his Alma Mater as Assistant in Surgery. 1896 found him with the Hospital College of Medicine as Demonstrator in Anatomy and Adjunct to the Chair of Surgery, and it was there in my freshman year I first contacted him. He left the Hospital College of Medicine to become one of the founders of the Medical School, Kentucky University, in 1898. I again contacted him there when I joined the corps of assistants in that school in 1903. He was now Professor of Surgery jointly with the late Joseph M. Holloway until the latter's retirement as the Kentucky University's first Emeritus Professor. When the University of Kentucky Medical School combined with the University of Louisville, he continued in the new school as Professor of Surgery and Clinical Surgery and taught there until 1924, when he retired from the field of teaching.

What more can be said of this Castor and Pollux of the local teaching group? A scholar reaches his full development only when he knows how to teach. His teaching ability is a measure of the clarity of his own knowledge and a challenge of the future. Sergeant Ballyntyne, English barrister, when asked the highest qualification for a Lord Chief-Justice, replied, "A Lord Chief-Justice should, in the first place, be a gentleman, and then if he

should know a little law, it would be much the better." As Lords Chief-Justice of medical pedagogy these two men and surgeons qualify. Both were students; both had energy aplenty. They achieved by merit. They were interested in teaching; they rarely missed faculty meetings and in those days faculty meetings were held. Like Castor and Pollux of old they have held a fraternal affection; they have had many adventures in common. I think of Marvin as the Chief, and then may I quote from Macaulay's "Lays of Ancient Rome."

"Back comes the Chief in triumph
Who in the hour of fight
Hath seen the great twin brethren
In harness on his right.
Safe comes the ship to haven,
Through billows and through gales
If once Castor and Pollux
Sit shining on the sails."

RESPONSE



J. G. SHERRILL, M. D.

Louisville.

Mr. Toastmaster and Colleagues:

Your splendid testimonial overwhelms us. Dr. Frank joins me in expressing our appreciation of this demonstration of your regard. We may not deserve all the nice things you have said, but we have tried to merit your approval. During the years, we have stood side by side fighting for the highest ideals of the medical profession and for the employment of all the useful aids for the care of the sick, the injured and the crippled. This includes the blind, the mentally deficient and those physically unfit for self support and dependent upon the State for their proper care.

We entered Medicine just at the dawn of a new era, when empiricism was disappearing as the result of the development of true science. The work of Koch, Pasteur, Lister, and a host of other men was removing the veil which had for centuries hidden the truth concerning the causation of disease and its rational treatment. Nor did these men of inquiring minds in the Eighties dream of the

wonderful vistas which lay in the future or estimate the wonderful results of their work. Certainly, neither of us was able to picture the wonderful changes occurring from which Medicine developed into a real science. The art of Medicine and Surgery had reached a very high degree, but the science was only beginning its development.

Medical instruction up to that period in this country was conducted, for the most part, by physicians imbued with the idea that only by their individual efforts could medical knowledge and skill be transmitted to future generations. The result was the development of medical schools throughout the country, only a few of which were supported by endowments or by public subscription. These men recognized that the best method of learning their calling was by teaching, which brought out their best efforts; at the same time, they developed their powers of observation, their diagnostic acumen and their professional reputation. They were repaid in this way for their efforts, since their financial remuneration was small.

Louisville ranked high as a medical center in those days. Gross, Flint, Holland, Theophilus Parvin, and others had been called to other schools because of their reputations. Benjamin W. Dudley, Tobias Richardson, Daniel Drake, Lunsford Pitts Yandell, Henry Miller, T. S. Bell, Charles Caldwell, and others had fought a good fight and completed their work. David Yandell, John A. Ouchterlony, J. M. Bodine, Turner Anderson, E. R. Palmer and Wm. Bailey led the groups at the University. C. W. Kelly, J. A. Ireland, W. H. Galt, George M. Warner, H. B. Ritter, J. M. Holloway, A. M. Cartledge, L. D. Kastebine, Edward Miller and Sam Cochran held the torch for the students in the Louisville Medical College. By their personal efforts, the Medical School Building at First and Chestnut was erected and stands as an evidence of their energy, their enthusiasm, their foresight and their faith in the future.

[William H. Wathen, Joseph Benson Marvin, Joseph M. Matthews, Martin F. Coomes, Henry Orendorff, Samuel E. Woody, Clinton W. Kelly, and James M. Holloway kept the light burning in the Kentucky School of Medicine.

The Hospital College of Medicine was manned by J. B. Larrabee, Dudley S. Reynolds, S. G. Dabney, Frank C. Wilson, Lewis S. McMurry, H. Horace Grant, John E. Hays, J. Louis Howe, Cornelius Skinner, John F. Barbour, and P. Richard Taylor, who was dean at the time of the consolidation of the Schools as the University of Louisville. The names of such brilliant surgeons as Wm. C. Dugan and William L. Rodman must be mentioned,

although just beginning their professional careers about 1890. Rodman was Professor of Surgery in the Kentucky School and later became Professor of Surgery at the Medico-Chirurgical College of Philadelphia, where he acquired much fame.

When the split came in the Kentucky School of Medicine, followed by the formation of the Kentucky University Medical Department in 1898, Joseph B. Marvin, Clinton W. Kelly, James B. Holloway, Sam E. Woody, "The Old War Horses," were joined by Thos. C. Evans, Louis Frank, J. Garland Sherrill, Henry E. Tuley, W. Ed Grant, Carl Weidner, and Leon L. Solomon, who first obtained professional rank at this time. This marked the real bow of Dr. Frank and myself to the Profession as teachers after ten years as instructors. This faculty took a most active part in the final union of the School to infuse new life into the University. Joseph B. Marvin was one of the forceful leaders in this advance, but all in the combination recognized that the grand work of the proprietary schools was completed and that the new methods and appliances needed for medical instruction could only be provided by schools with an endowment or some form of public support.

The value of these schools in the early days cannot be overestimated in laying the foundation of medical teaching and carrying on until public recognition of the necessity and the civic duty to carry on medical education. The past fifty years have seen the combat between the old school of ideas and the final acceptance of the proof that germ life causes disease, particularly of the contagious and epidemic type. The fact is apparent that the greatest work in the prevention of disease during these years was done by the medical profession as a whole and by individual physicians of investigating minds. Moreover this was done at great financial loss to the profession as a whole and as individuals. Later the work was continued by the public health departments, still backed and supported by the profession.

The great cry about the high cost of medical service and the criticism of the profession is neither true nor just. The people of the United States should be ashamed of its attitude toward a most substantial group of citizens who for years has served all the sick, when a great part of the service has been rendered with no hope of compensation. I can state without fear of contradiction that no needy sick person will be refused care by the doctors of America, nor is he so far from medical and hospital facilities that aid cannot be obtained.

Again I thank you for your ovation and

express our appreciation for it and yet more for your affection and loyalty. A word to you doctors and fellow comrades:

A Ministering Angel thou.
Relieving suffering then and now—
Here and there in a world of strife,
Saving perhaps a human life.

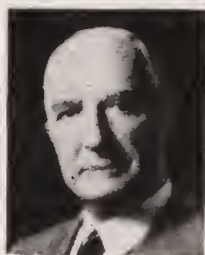
You may make perhaps a mistake,
In choice of the road you will take,
Good judgment comes with mature years
Which will help wipe away some tears,

There is joy in a task well done,
A soldier's pride in a battle won,
Hope for the future of mankind,
A strong belief in the divine.

Even with a world now at war,
With everything so much ajar,
Through an outlook that is quite ill,
The world may show sanity still.

When this occurs then doctors you,
Will receive appreciation true,
And despite carping critics here,
Will meet all your loved ones there.

RESPONSE



LOUIS FRANK, M. D.

Mr. Toastmaster and my friends: I did not realize that we had so many friends in the local profession, yet as I look about me, I see a large number whom I have had the opportunity to know in the relationship of teacher.

Dr. Sherrill has expressed, far better than I am capable of doing, our great happiness and appreciation in the realization of the honor you have done us in this testimonial dinner. Nothing which has ever come to me has touched me so deeply or has got closer to my very heart than this exhibition of the kindly feeling of you, our neighbors and colleagues. I look upon this occasion, not as a tribute to any accomplishment of ours or to any achievement or to any high honor which may have come to us, but as a mark of esteem, as an index of your affection and as showing your personal regard for us and, as such, we appreciate it the more deeply and I profoundly thank you.

MANAGEMENT OF LESIONS OF THE COLON AND RECTUM*

FRANK H. LAHEY, M. D.,
Boston, Massachusetts

I wish to tell you how pleased I am to receive an invitation to come to Kentucky. Having been involved in bird dogs, field trials and shooting, of course my interests have led me for a great many years into the South, but into the further south, Alabama, South Carolina and Georgia, and I have not had the opportunity to make journeys to Kentucky and to know Kentucky and Kentuckians. For that reason and many others it is I say, a great pleasure to receive the invitation to address you.

I do not wish to pass over this opportunity of sincerely thanking Dr. Maurice G. Buckles for permitting me to have this place on the program. Nothing but the necessity of returning to the clinic because of a number of meetings which are taking place would prompt me to request the opportunity of leaving on this train which connects with the only train east tonight.

It has always been a formula with me that when one makes statements regarding thyroids, carcinomas of the rectum, ulcer, gallstones, esophageal diverticula, or whatever he wishes to discuss, and when he makes statements that at least sound authoritative and are intended in some measure to be authoritative, he should present the evidence of the amount of experience he has had. That is always open to the interpretation of vanity, and I wish to deny that and to state that my purpose in making the statement that we have now operated on a little more than 900 patients with cancers of the colon and rectum is purely to establish the fact that we have made all of the mistakes and we have met with almost all of the difficulties that could be met with in this situation. This experience has developed in our minds certain convictions which are directly the result of personal deductions from actual experiences and not the interpretations of other people's experiences by word of mouth or from the literature.

I am further interested to present to you not so much the technical side, although I will show a moving picture presenting one of the technical sides of carcinoma of the colon but rather to try to bring, if possible, from this experience, lessons which may make clearer the origin of carcinoma of the colon and the origin of its symptoms, to-

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gether with reasons why we should make earlier diagnoses of these conditions.

Any lesion of which 42 per cent and 47 per cent, respectively, of the patients with carcinoma of the rectum and colon who have had the radical operation are alive and well without recurrence after five years is worth talking about. When you have a type of malignancy in which you can state that 47 per cent of the patients with carcinoma of the colon are alive and well after radical operation, without recurrence at the end of five years, and 42 per cent of the patients with carcinoma of the rectum are alive and well without recurrence, then not only is this subject one which is well worth talking about, but one which is well worth repeating.

One of the things that I think should immediately be stressed in connection with carcinoma of the colon is that you can tell very well where any condition of malignancy stands when you know its operability, mortality and non-recurrence at the end of five years. Our mortality in cancer of the rectum up to three years ago was 8.75 per cent. Our operability up to three years ago was 54 per cent, and our non-recurrence was approximately the same as it is today. In the last three years we have increased our operability of cancer of the rectum to 72 per cent, with an increase in our mortality of only up to 10.25 per cent, an increase of 2 per cent, and our non-recurrence in the five years has been about the same.

Here is an extremely favorable situation. It is favorable because at a cost of 2 per cent increase in mortality we have obtained approximately a 20 per cent increase in operability. During the last year our operability was 88 per cent.

Before I go on to the discussion of some of the things that bring about this increase in operability, I want to say a few words about the question of operability in cases of cancer of the rectum, and then I want to compare it a little bit with the operability in cancer of the stomach. The increase in our operability from 54 to 72 per cent in cases of cancer of the large bowel is the result of two factors: we have educated our population, medical and lay, and we are operating upon people even with metastases. Due to a widened experience with the operation and a greater facility in doing it, we now without hesitation do radical removals of carcinoma of the rectum or carcinoma of the colon even though the patients have metastases in the liver, provided the metastases are not extensive. That sounds, on the face of it, a little bit foolish and needs explana-

tion. Obviously, no sensible surgeon and certainly no surgeon with judgment and humanity would submit patients with carcinoma of the rectum and carcinoma of the colon to a radical removal in the presence of a liver filled with metastases. On the other hand, it is equally foolish and unwise, we believe as the result of this experience, not to submit these patients to radical removal of the growths when they have one or two nodules in the liver. Why? When patients have a cancer of the colon or a cancer of the rectum with one or two nodules in the liver, their death is certain to be painful and very disagreeable. If on the other hand the local growth can be removed, their death from metastases of the liver is infinitely less painful and disagreeable and they are often permitted to live a number of useful and happy months and at times, years. It has been our experience, therefore, and we urge it upon those who are dealing with these conditions, that even though these patients have one or two metastases in the liver, and occasionally glands, provided the lesion either in the colon or the rectum is removable without undue risk, that is as it relates to the patient's general condition, it is distinctly desirable to remove the lesion.

If you wish to see how hopeful the situation in cancer of the rectum and colon is, you have but to compare it with cancer of the stomach. We have, I believe, in our clinic through chance and circumstance and not design on our part, probably as high an operability in cases of cancer of the stomach as exists in this country. We have an operability of 22 per cent; the average operability as reported in many places is 5, 6, 7, 8 and 9 per cent. But, unfortunately, our mortality in cancer of the stomach is about 33 per cent. One should never be particularly interested, we believe, in the mortality of cancer of the stomach because here often desperate chances must be taken. When you consider our non-recurrence at the end of five years, it is but 7 per cent, and when you compare an unfavorable 7 per cent in the cancers of the stomach with the favorable 42 and 47 per cent of non-recurrence in cancers of the colon and rectum, then it becomes extremely important that we do everything we can in the way of spreading this knowledge to the laity. It is so simple to teach the laity the all important thing. The all important thing that makes possible the early diagnosis of cancer of the rectum or colon sticks out like a sore thumb in practically every case. If you will review the history of every patient with cancer of the

colon you will find in it, standing up, as I say, like a sore thumb. the one factor that should be shouted from the housetops to the laity and to the medical profession. It is alteration in bowel function. We have taken a hundred cases of cancer of the right colon, a hundred cases of cancer of the left colon, and a hundred cases of cancer of the rectum; 98 per cent have had in their history an alteration in bowel function. When you have a factor which is as easily interpreted, which is such an obvious warning sign as alteration in bowel function, diarrhea, constipation, alternating diarrhea and constipation, change in the character of the stools, or the discharge of blood, there is really no excuse not to make the diagnosis early. When we try to educate the public into the early diagnosis of cancer of the stomach, on the other hand, we have only one thing to say; the only thing we can say to a patient with a possible carcinoma of the stomach is: If you are over forty years of age and you have had indigestion for over a week persistently, in spite of doing everything for it, then you should have a gastro-enterological examination. The symptomatology of carcinoma of the stomach is so silent and so bizarre that we cannot set up this definite, tangible, outstanding group of indications in the possible presence of the disease as we can with carcinoma of the colon and rectum.

In addition to the ability to make early diagnoses in this condition, everything about carcinoma of the colon and rectum is hopeful. Seventy-five per cent of all the cancers of the large intestine occur in the descending colon, the sigmoid, rectosigmoid or rectum. This is fortunate because it is in the carcinomas low in the colon that blood is discharged early in the course of the disease.

An interesting point influencing the number of cases having carcinoma of the colon and rectum is the relationship between carcinoma of the colon and rectum and benign lesions such as adenomas and polyps of the rectum. If 75 per cent of the cancers of the rectum and colon are in the descending colon, sigmoid, rectosigmoid and rectum, so 65 per cent of all the polyps in the large intestine are in the descending colon, the sigmoid, rectosigmoid, and rectum. One cannot avoid definitely the inference and deduction from this that the relationship between cancer of the colon and polyps is very real. Furthermore, when you realize that the pathologic report on practically all cancers of the colon and rectum is either malignant adenoma or adenocarcinoma, it again becomes evident

that the situation in carcinoma of the large intestine is parallel to that in cancer of the thyroid in originating from lesions originally benign. We have now operated on approximately 17,600 goiters and we have reviewed the adenomas and proven that 96 per cent of all the cancers arising in the thyroid start in the lesion which is originally benign, an adenoma. This same situation is also true of cancer of the rectum and colon. Most of the cancers of the rectum and colon undoubtedly start at the base of a polyp in an adenoma and were primarily benign.

Look at the cancers of the colon and rectum after they are removed. Think of one maxim which stands out prominently. It is that when a cancer of the colon or rectum entirely surrounds the lumen of the bowel, the lesion is from six months to a year old. What is the basis of it? The basis of that is that all cancers of the rectum or colon start as local lesions: on the lateral wall of the bowel, that they spread out like the charred circular bottom of a camp fire. The reason for that is that they start at a central point, ulcerate, erode and build up in the periphery until they build this circular, moat-like edge on a lateral wall of the colon. Therefore, the teaching that when a cancer has completely surrounded the lumen of the colon it is at least from six months to a year old is based upon the fact that it starts as a lesion of the lateral wall and then surrounds the entire colon and takes that length of time to grow around the intestinal tube. That is why we look with suspicion upon any lesion that has surrounded the entire colon, because we know its age is at least six months in the average case. This, however, by no means makes it a hopeless case.

Now, what has all this to do with the prevention of cancer of the rectum and colon? I would strongly urge that proctoscopy and sigmoidoscopy be made a part of every routine physical examination. We have now established, as have most clinics and many surgeons and medical men, proctoscopy and sigmoidoscopy as a routine part of physical examinations, with the discovery of a surprising number of silent polyps and silent adenomas that can be fulgurated and removed. Even small early malignant adenomas can be removed by fulguration and watched and these patients often saved from later major surgical procedures and certainly prevented in some cases in the non-malignant group from having cancers of the rectum at a later date.

There are certain things about proctoscopy in which Dr. Haynes, who has been so

kind as to be willing to discuss this paper, has played a considerable part. Proctoscopy was a more or less doubtful method of examination until the proper tables and proper positions were obtained; his table makes it possible to obtain such excellent exposure and to fulgurate and manipulate these doubtful and early lesions for biopsies so satisfactorily.

It is extremely important that these patients be properly prepared. They should be instructed to take an enema at home before coming for the proctoscopy or have the rectum adequately cleansed in the clinic before the proctoscopy is undertaken. Then with these patients over the end of the table, as can be accomplished with Dr. Haynes' table, hanging by their hips so that the rectum is suspended by its skin attachment and its levator attachment, no longer do the liquid feces run up into the proctoscope, no longer do you have to make such wide distentions with air, and it is possible to introduce the proctoscope and sigmoidoscope to high levels and to manipulate for biopsy and to fulgurate many of these rectal lesions.

One thing I would urge upon anyone who does sigmoidoscopy, that the procedure is not difficult, the equipment is not expensive, and it does not require a great deal of experience to learn to do an adequate proctoscopy and sigmoidoscopy. On the other hand, the fulguration of these papillomas can be a dangerous procedure and should not be undertaken particularly when they are high except when the patient is in a hospital where the emergencies which can arise may be quickly met. We have seen two very serious things happen from the fulguration of high polyps and high adenomas. One is secondary perforation from deep fulguration and necrosis, and the other, more important than that, serious hemorrhages where they cannot be controlled from below. These patients should be where their abdomens can be opened and the hemorrhages controlled from above if necessary.

One other thing that I would strongly urge upon anyone who is dealing with these conditions is the fact that all of us are very likely to be gratified with the discovery and diagnosis of an early carcinoma of the large intestine. Do not forget that just as carcinoma starts from a polyp, so polyps are multiple, and that although it is gratifying to make the diagnosis of carcinoma and to demonstrate it at an operable stage, it is depressing to have made the diagnosis but to have overlooked another coincident lesion. Don't forget that these patients who have carcino-

ma may and do not infrequently have multiple lesions, sometimes a malignant one with an associated benign lesion which may later be malignant, and at times, double malignant lesions. It is here, I think, that roentgenograms made after contrast enemas now so popular, now so well done by all roentgenologists, are of such great importance.

Regarding contrast enemas, just as with proctoscopy and sigmoidoscopy the success of roentgenograms relates to how well these patients' colons are prepared before they receive the enema. It is not possible to get good roentgenograms after contrast enemas with accurate, detailed intestinal outline when these colons are filled with feces; therefore, adequate preparation is also essential here.

Finally, as relates to the prevention of carcinoma of the large bowel, sigmoidotomy and colotomy need to be done more often. We have in the past three years removed polyps from the rectum, sigmoid and colon in 209 patients through the sigmoidoscope or by colotomy. Every time you demonstrate one of these high polyps by contrast enema and remove it by sigmoidotomy or colotomy, snaring out the lesion with a good base of the mucosa, then closing the colon, you have very definitely protected that patient from a potential later malignant lesion of the colon.

I do not need to go on and dilate on the diagnosis of carcinoma of the rectum and colon. There are just one or two points that I wish to make. One is: Remember that the mortality and the diagnosis are related to the segment of the colon in which the lesion occurs. Divide the colon into the proximal colon from the cecum to the splenic flexure and from the splenic flexure to the rectosigmoid and from the rectosigmoid to the anus, and you can then determine what the risk is, what the symptoms are, and in some measure what the prognosis is.

The proximal colon is the most difficult from the point of view of diagnosis and the most difficult from the point of view of danger as relates to operation. Why? Because the contents of the proximal colon are liquid, because the proximal colon is filled with organisms of a high virulence, and because the feces here are liquid, malignant lesions do not at this level produce early obstructive symptoms; because the lesions are high in the intestinal tube they do not produce, as you will see in later slides, the early appearance of blood because the blood becomes mixed with the liquid feces and is not

recognizable except by means of laboratory measures as occult blood. Likewise, primary suture of the intestine is dangerous here because the contents of the proximal colon are liquid, with organisms of high virulence and surgical procedures involving suturing tend to result in easy contamination of the peritoneal cavity.

When we get, on the other hand, to the midcolon,, here we have a different situation. Here the lesions are local in character at first, the blood appears much earlier in the stools, but due to the fact that the feces are solid in character there is here an earlier appearance of obstructive symptoms.

Remember in the proximal colon (and I have violated this teaching myself more than once) that the outstanding feature, and we do not understand what makes it, is secondary anemia. When you see a patient within the cancer age with an unexplained secondary anemia you should be suspicious that he has a lesion of the ascending colon. This is possibly due to the absorption of the liquid toxic material in the right colon through the ulcerating base of these lesions.

In the rectum the symptoms are the appearance of unchanged blood, the appearance of hemorrhoids, a feeling of a foreign body in the rectum, and a feeling of an incomplete emptying after defecation.

I have repeatedly said that I do not know what it is about a rectal examination that is repugnant to a patient and apparently likewise repugnant to the surgeon. One can learn more in abdominal diagnosis from a good digital rectal examination than from almost any other thing, with the exception of abdominal palpation. Rectal examination should be made with the patient leaning over the table, in the knee-chest position, and best of all in the squatting position so that on straining down, high lesions are squeezed down to the tip of the examining finger. Digital examinations done this way will often make diagnoses that would otherwise be missed.

There is one thing that has played a great part in holding back the surgery of carcinoma of the colon and rectum and that is colostomy. There is throughout the country an attitude on the part of many doctors and many patients that life with a colonic stoma is a living death. There is a basis for this which is sound, and it is this: most physicians who have dealt with colostomized patients have dealt with patients who have been colostomized for an inoperable carcinoma, and therefore they have had the combination of uncontrollable fecal discharges

through their sides with the combination of uncontrollable symptoms associated with inoperable carcinoma. Many physicians whose experience with colostomy is limited have had almost no experience with the management of the colostomies with which we deal, that is, the colostomies in patients whose malignancies have been removed and have not recurred.

We have now a very large number of patients with colostomies which are functioning well, who are happy and who are working every day. It is most important that it be spread over the country that a colostomy is not a living death and that with one, one can work, play and do almost anything without being handicapped as to bowel function or bowel odor. On what principle? There are just a few rules which make this possible. You cannot produce a sphincter by any of the tricks in doing colostomy. The colostomy must be a good colostomy, at least an inch and a half above the level of the skin, and you must control the bowel function by habit and by constipating the bowels. You can teach these patients to so constipate themselves that their bowels will move only when they take their enema, once in two days or once in three days. Behind that is still another thing that applies universally to the practice of medicine. Success is related to the pains and interest you will take with the human individual. If you do a colostomy and turn the patient loose to manage his stoma he will be an utter failure and never learn to manage it; if you will see him every three weeks or every two or three months, depending on where he lives, if you will ask him to come to you and report his troubles to you, and if you will train him to be patient for six months until the scar tissue contracts around the colostomy, train him how to take his enema, his colostomy will be satisfactory. Seventy-five per cent of our patients wear no bags. We teach them to irrigate themselves every second or third night, not morning, night because they have the time to attend to it, to wash their colons out carefully, to pass a catheter ten to twelve inches into the colon, to irrigate it slowly until it is full, to let it empty over a stork sheeting into the toilet, and then to sit and smoke or read until the water has run out. They wear a bag that night, but the next morning after the water has run out, they wear an elastic belt, a pad of gauze, and no more. In the beginning, for two months they must stay on a quite rigid diet until they have learned to constipate themselves. Following that they can modify their

diet considerably. Many of them will learn the modification of their diet with green vegetables and fresh fruit and are able to control their bowels very successfully. I believe there is nothing more important for the progress of surgery and malignant lesions of the colon than that we spread before the lay community the fact that colostomies are not the terrible thing they used to be thought to be.

One other thing. When you begin to be sentimental about a patient's anus and its sphincter and do conservative operations, you then begin to expose him to the risk of recurrence. No matter how small the lesion, don't try to save the sphincter. When you begin to modify the radical operative procedures in the early cases you then lose the chance for a cure. Surgery for cancer must be aggressive surgery, it must be radical surgery in the early stage, because that is the hopeful stage. Again and again we have these patients come to us with carcinomas the size of the little fingernail, with their doctors and the patients begging that we do local resections. Never do we do it because at that time it is such a hopeful situation. We say our obligation to the patient is to present that patient with a cure, even if he has to have a colostomy. When he returns with his sphincter intact but with a recurrence, he will never forgive you and you will not forgive yourself for not having given him the chance for a cure when you operated on him early and when you had the opportunity to do a radical removal.

Here are some of the figures to present the outstanding feature of diagnosis in carcinoma of the colon and rectum: 100 cases of carcinoma of the right colon, 100 cases of carcinoma of the left colon, 100 cases of the rectum, a total of 300 cases were reviewed for their early symptoms; altered bowel function in the rectum, 79 per cent; 82 per cent in the left, 81 per cent in the right, total 80 per cent; abdominal cramps or pain in the rectum, as you would suspect, very few, 7 per cent; in the left colon 77 per cent, and in the right colon 87 per cent, a total of 57; abnormal stools, abnormal in size, ribbon stools, or blood, 86 per cent in the rectum, 46 per cent in the left colon, 9 per cent in the right colon, of course because of the liquid character of the stool; total 46 per cent. Notice that only 2.5 per cent had no change in their bowel function.

Here on the slides, illustration 1, you will see the typical polyp from which we feel so often develop carcinomas of the rectum or colon through malignant degeneration at the

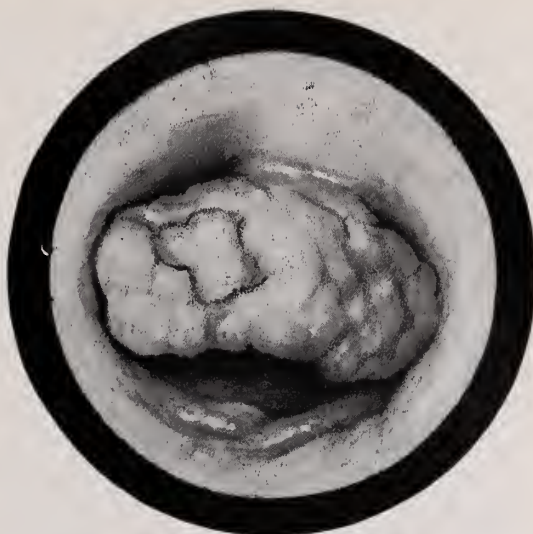


Figure 1. Rectal polyp seen through the proctoscope, ideal for fulguration. This polyp proved to be benign. This is the typical polyp so often the forerunner of cancer.

base of such a lesion. I have a number of these slides to show you, but a single example reproduced in this paper will be sufficient to illustrate the point which I wish to make. Notice in this illustration that a large portion of the mucosa has been excised, together with the polyp, against the possibility that the pathologic report may possibly show malignant degeneration at the base. It will be of interest to you all to know as already stated that we have now removed within the past two years polyps from 209 patients either through the sigmoidoscope or by means of sigmoidotomy or colotomy. One can appreciate that certainly in this group of cases a very definite number have been saved from the later development of carcinoma of the rectum. We would again stress the very great advantage of proctoscopic and sigmoidoscopic examinations and the value of contrast barium enemas in demonstrating these lesions early while still benign and still removable.

I do not wish to enter into the discussion of technical procedures since this will be very well illustrated by our moving picture film which will follow this discussion. There are, however, one or two points about which I would like to speak.

The principle of the operation which bears my name is very well shown in illustration 2. One can see in this that the sigmoid has been divided, its mesentery incised, down to the promontory of the sacrum but not including the superior hemorrhoidal artery so that the lower segment implanted as it is just above the pubis is completely vascularized and well nourished. Notice

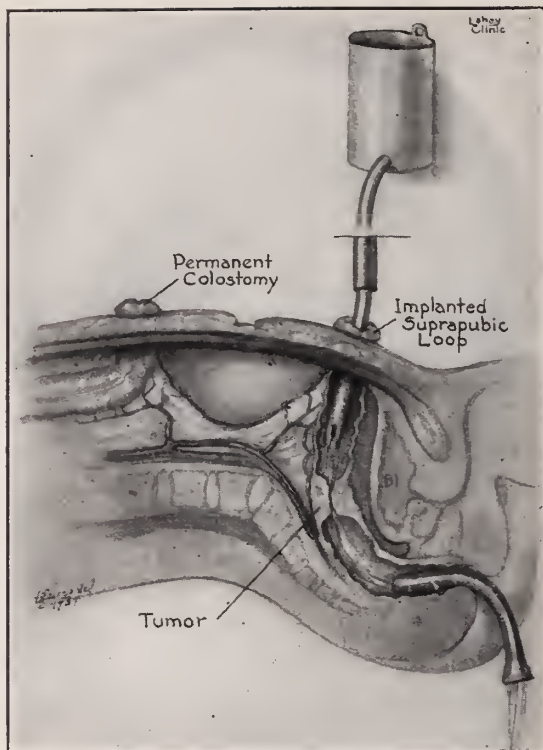


Figure 2. The author's operation for cancer of the rectum. Descriptive notes concerning this illustration will be found in the text.

that the upper end of the divided sigmoid has been implanted into the left iliac fossa where it is to serve as the permanent colonic stoma. The principle which I had in mind when I devised this operation was (1) the establishment of the colostomy, and (2) the segregation of that part of the rectum which held the malignant lesion into the pelvis with its blood supply still retained. I had in mind when I devised this operation that if the entire segment of rectum which later needed to be removed could be so segregated into the pelvis that with the patient at the Trendelenburg position and his abdomen walled off with the small intestine in the upper part of his abdomen, a situation similar to a hysterectomy would then be present. That segment of the rectum containing the malignancy could then be irrigated through and through for the period of two or two and a half weeks between the first and second stages, inflammatory reactions about the malignant lesion thus controlled, the colostomy establishing itself well, the wound vaccinating itself locally against the open upper end of the implanted rectum, and the patient's general condition improved. This has worked out as a very safe operative procedure not only in our hands but in the hands of many surgeons throughout the country.

In illustration 3 is seen another principle which I devised and which has been very useful in resections of the colon. This is the principle of staggering combined with modification of the two-stage Mikulicz procedure for removal of malignant lesions of the colon. You will notice in illustration 3 that the entire right colon has been removed together with a large V of its mesentery, and that the ileum has been approximated to the transverse colon to form the double barrel loop which is to be the first stage of the Mikulicz procedure. A jaw of a clamp placed in each loop is then closed and the septum between the

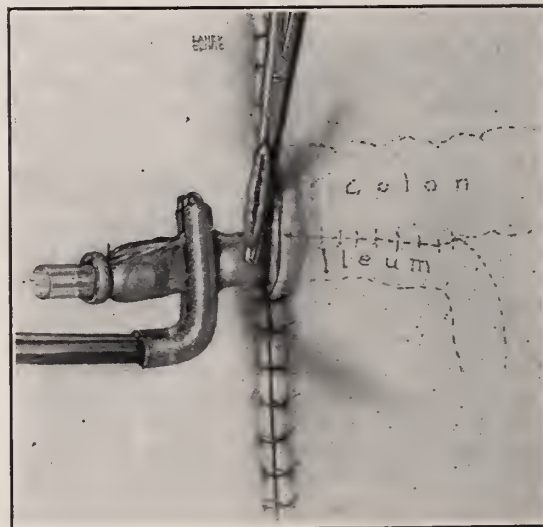


Figure 3. The plan of staggering the ileum, devised by the author, with the modification of the two stage Mikulicz procedure. Descriptive notes concerning this illustration likewise will be found in the text.

two eventually severed. The important point which I wish to bring out in connection with this is the principle of staggering, accomplished as you will notice by cutting away the attached mesentery of the ileum from about 4 inches so that it can be brought outside the abdomen when the double barrel loop of ileum and transverse colon are implanted in the wound. By means of this staggering of ileum a spigot can be established by tying into this loop a glass tube or rubber catheter which is carried to a bottle on the side of the bed, thus accomplishing immediate decompression of the intestinal tract. One of the safety factors which can be added to any resection of large bowel is the ability to immediately drain the proximal loop of resected bowel by means of this staggering scheme whereby liquid feces of the small intestine can be drained immediately into a bottle at the side of the bed without danger of contamination of the wound. This is a very helpful scheme in

overcoming the immediate obstruction which results from other obstructive procedures and is a distinct safety factor in procedures accomplishing removal of sections of the colon. At the end of four or five days, by which time the wound will have been soundly sealed, the devascularized segment of ileum will slough off even with the end of the transverse colon, thus establishing the two open loops of the double barrel Mikulicz plan of procedure.

We have now employed this two-stage modified Mikulicz plan of removal of the colon for several years and are very much pleased with it. It practically eliminates the danger of peritonitis, it makes possible when this staggering scheme is employed the removal of sections of the colon in the presence of moderate degrees of obstruction since it is possible to decompress the partly obstructed bowel at the same time that the colon is removed.

These patients return at the end of two months for the closure of their enterostomy. This is an extraperitoneal procedure, an entirely safe one in which the peritoneum is not opened and of the large number in which we have done this there are none which have failed to remain closed.

In discussing the operative procedures for cancer of the rectum, I would particularly like to say just a word about anesthesia. Practically all of these cases are done under spinal anesthesia. We have now for some time employed nupercain spinal anesthesia in dilutions of 1:1500. Our anesthetists have established the following dosage standards for dilute nupercain anesthesia. They have changed the dosage rather in relation to height than in relation to weight. They start with a minimal dose of 15 c.c. of a 1:1500 solution of nupercain for a patient of minimal height, that is, 5 feet. They add 1 c.c. of the dose of solution for every 3 inches increase in height over 5 feet, but never give more than 20 c.c. Nupercain, when first employed in concentrated solution, was an extremely dangerous anesthetic, but since the development of the dilute nupercain solution by Howard Jones of London, it has become not only a very safe spinal anesthetic but one which produces less drop in blood pressure than do the other spinal anesthetic agents. Nupercain spinal anesthesia in 1:1500 dilution has the great advantage of producing anesthesia ranging from three to three and a half hours. While one rarely needs this length of time for any operation for cancer of the rectum, nevertheless it is a great comfort with these patients

to feel certain that they will not come out of their anesthesia and lose their relaxation while the operation is being performed. I always feel when I am discussing spinal anesthesia as enthusiastically as I do since we employ it in such a high percentage of our cases that I should make certain qualifications about it.

I feel very strongly that spinal anesthesia in the hands of experts is one of the greatest advances in anesthesia. It is but fair to say that we have in the clinic six full-time physician anesthetists who are devoting their lives to anesthesia and who are experienced not only in the administration of spinal anesthetics but in selection of the risks for spinal anesthesia and the meeting of the emergencies which not infrequently arise during its course. I feel very strongly therefore that I should always qualify my statements about spinal anesthesia by saying that spinal anesthesia is desirable in the hands of men who are qualified to meet the emergencies which will arise with it, but that in the hands of men who are not experienced or in the hands of surgeons who give the spinal anesthesia and then turn the patient over to a nurse, it is an extremely dangerous anesthetic.

I cannot close this discussion on the subject of cancer of the colon and rectum without again making an appeal to those general practitioners who are seeing patients intimately and at first hand to recall that if we could get every patient and every doctor to submit any patient who has had an alteration in bowel function and who is over thirty-five years of age, to thorough proctoscopic, sigmoidoscopic and roentgenologic examinations we would make many more earlier diagnoses of carcinoma of the colon than we do. While end results with 42 per cent of the patients with carcinoma of the colon and 47 per cent of the patients with carcinoma of the rectum, alive and well more than five years without recurrence are excellent, nevertheless if the above statements which I have made could be more generally appreciated, namely, that out of 300 cases of cancer of the colon and rectum investigated for symptoms but 2.5 per cent failed to show an alteration in bowel function, the results would be still better. Could we have this fact always uppermost in the minds of the laity and the doctors, we would make still greater progress with this very hopeful situation in malignancy.

THE TREATMENT OF DIARRHEA IN INFANTS*

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There are two types of diarrhea; one the enteral which is usually the summer diarrhea and the other the parenteral, or that which accompanies such acute infections as otitis media and sinusitis. Except for attention to the parenteral lesion the treatment of both is the same.

At various times numerous organisms have been thought to cause epidemics of diarrhea, but as laboratory techniques improve, more and more cases are being proved to be due to one of the several strains of the dysentery bacillus. One interesting view is that of Hartman, Manville and others who think the acidity of the gastric juice of infants, which is normally less than that of adults, is further reduced by hot weather, fever and the buffer effects of milk and other foods. Such reduction of acidity permits the ascent of the colon bacillus to the upper part of the small intestine and even to the stomach. It has been shown that certain strains of the colon bacillus can convert the amino acids histidine and tyrosine into the extremely toxic histamine and tyramine which cause the symptoms of prostration and shock so often seen in these cases.

Before discussing treatment a few words might be said about prevention. The importance of boiling milk and screening against flies of course need not be mentioned, but the value of breast milk cannot be emphasized too much. It has been estimated 97 per cent of the diarrhea of infants occurs in those artificially fed and that occurring in breast fed infants is rarely fatal. If artificial feeding must be resorted to, Marriot, Davidson and others have demonstrated repeatedly the value of lactic or other acid milks in keeping down growth of pathogenic organisms both in the milk before it is consumed and in the intestines. The use of various fruits in treatment will be taken up later but in connection with the value of the lactic acid bacillus the interesting experiment done by Weinstein and Weiss on white rats should be mentioned. They fed banana powder, apple powder, and raisins to rats subsisting exclusively on a chopped beef diet and brought about a change in the intestinal flora from one in which non-aciduric bacteria predominated to one in which the lacto-bacillus acidophilus composed 70 to 90 per cent of the organisms.

The changes which diarrhea produce in the infant are dehydration, disturbance of the mineral balance and acute inflammation of the intestinal tract. Obviously, the first objective in treating an infectious disease is to attack the offending organism. Anti-dysentery and anti-colon bacillus sera are available; but since positive cultures are often not obtainable at all, and in any case not for several days, and since agglutination tests are not positive under ten days, it is plain that one cannot avail oneself of specific treatment early in the disease. Treatment consists then in rest of the gastro intestinal tract and restoration of fluid and mineral balance. No matter what else is done practically everyone institutes treatment in severe cases with a twenty-four hour or longer period of starvation or of only water, weak tea, or 5 per cent glucose by mouth.

The most serious and perhaps the most easily remedied change in the blood chemistry is the disturbance of the acid base equilibrium. This results in a marked decrease in the carbon dioxide content of the blood. It may go from a normal of around 60 volumes per cent to the alarming level of ten or less volumes per cent. This is due largely to loss of base bicarbonate in the stool but there are other important contributing factors, such as: Elevation of the non protein nitrogen, due either to diminished renal action because of depleted fluids, or to an actual nephritis caused by the offending organism; second: elevation of chlorides (these may be elevated, normal, or diminished). Even vomiting, however, does not cause much loss of chlorides because of the diminished hydrochloric acid in the gastric juice of these sick infants; third: reduction of the organic soluble phosphorous of the red cells. However if nephritis is present this may be increased. Replacement therapy for this condition is not yet on a practical basis. Fourth: increase of the guanidine content of the blood. Minot and her co-workers showed that in cases where the carbon dioxide content of the blood repeatedly returned to low levels, even after alkali therapy, that the guanidine content of the blood was definitely increased.

In attempting to restore to normal this severely altered blood chemistry it is essential to have a quantitative knowledge of the changes that one hopes to correct by specific measures. There is no way to distinguish clinically, between acidosis and alkalosis in the majority of cases. Marked dehydration, rapid breathing, cyanosis and convulsions may be present in both. The most astute observers have declared their inability to

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diagnose acidosis by physical signs alone. The history of vomiting is unreliable because as has been said, there is such a wide variation in the chloride content of the gastric juice. There are many times however, when one would feel that with a history of no vomiting but of innumerable liquid stools, sufficient base had been lost to cause a severe acidosis. This would be true if we could reckon without previous home treatment with liberal amounts of soda. Baking soda is almost a specific but it must be given in carefully calculated amounts lest a moderate acidosis be turned into a fatal alkalosis. Many such cases have come into the hospital and died with a CO_2 of 100 or more.

In order, then, to bring an infant out of acidosis and yet avoid throwing him into alkalosis it is almost essential to know the carbon dioxide content of the blood. This is a relatively simple procedure, much simpler than a blood sugar determination. It requires about 5cc of whole blood delivered under oil and it takes about one half hour to do in the laboratory. When the CO_2 has been determined, the amount of alkali required to bring it to near normal may be calculated. One of two alkalis is generally used. Either sodium bicarbonate of the ordinary kitchen variety or Hartman's sodium lactate. Sodium bicarbonate has the advantage of being cheap and always available. It acts more quickly than the sodium lactate, hence is recommended where acidosis is severe. Also, Minot has proved that in guanidine intoxication the acidosis is due primarily to increased production and defective metabolism of lactic acid. Hence the use of Hartman's solution or sodium lactate is ineffective. Since we rarely have the means of determining the guanidine level in the blood it would seem wise in all cases when the CO_2 is very low and intoxication marked, to use sodium bicarbonate. The dose in grams may be calculated by multiplying the patient's CO_2 deficit by the body weight in kilograms and this by the factor .026. The unsterilized soda (taken usually from the middle of the can) is put in sterile distilled water to make a four or five per cent solution. This of course must not be warm enough to break down the bicarbonate into carbonate. It is given immediately intravenously. Whenever the CO_2 is below 25 volumes per cent intravenous alkali should be used. Sodium lactate, on the other hand, has the advantage of being buffered and is less likely to cause alkalosis. Hartman gave intravenous sodium lactate to normal children and never produced a severe alkalosis—the CO_2

returning to normal in one to two hours. 60 cc per kilogram of the 1-6 molar sodium lactate is sufficient to raise the CO_2 twenty to twenty-five volumes per cent.

Although theoretically, we should always have a CO_2 determination before administering intravenous alkali this is not always practical and it would be unfortunate to withhold this life saving measure for the want of laboratory control. One can calculate the dose of either sodium bicarbonate or sodium lactate sufficient to raise the CO_2 twenty volumes per cent. If the level is in the danger zone of 10 to 25 this will be sufficient to raise the patient to the relatively safe level of 30 to 45. If the CO_2 is as high as 50 or even 60 raising it 20 more volumes per cent will not produce a severe alkalosis. It is convenient to remember that one half of level teaspoon of sodium bicarbonate will raise the CO_2 of a ten pound infant 20 volumes per cent. Repeated doses of alkalis are dangerous.

Calcium gluconate has proved to be an important therapeutic agent in the treatment of toxic cases. Minot proved that the calcium ion is successful in controlling guanidine intoxication. She uses sodium bicarbonate plus calcium gluconate—giving from two to five cc of ten per cent gluconate in 100 cc of five per cent glucose intravenously and from two to five cc intramuscularly twice daily.

We now come to the type and amount of fluids to be used in restoring fluid balance. In dehydration of only moderate degree saline or five or ten per cent glucose are convenient. We have been taught for years that saline is ideal because the kidney obligingly excreted the ion that was not needed. But Hartman and others warn of the danger of increasing the chlorides when diarrhea and oliguria are present, because of their tendency to keep the base bicarbonate reduced, thus producing a persistent and often fatal acidosis. Hartman's lactate Ringer's solution is most useful. This is not sufficiently alkaline to use in severe acidosis; but on the other hand it is not too alkaline to use in a mild alkalosis. In addition it replenishes the supply of other minerals that have been lost. Both Hartman's Sodium lactate and Lactate-Ringer's Solutions are put up in concentrated form by the Eli Lilly Company and the directions for use are in the literature in the box. As to the amount of fluid not more than 90 cc per pound of body weight should be given in twenty-four hours. It is best to give this in divided doses at eight hour intervals. The scalp veins of an infant are

ideal and rather easily used. So much edema, phlebitis and even septicemia have been caused by the tying of a cannula in a vein that this method should be used only as a last resort. If the condition is not urgent and the circulation good the subcutaneous and intra peritoneal routes are very convenient. Rarely is it possible to get a sufficient supply in by mouth unless a catheter is anchored in the oesophagus. However we all tend to forget that appreciable amounts of fluid can be introduced this way.

Of course whole blood is the best fluid to put in any patient's veins. It is not only physiological and buffered but it increases the oxygen carrying power and adds much needed antibodies and vitamins. Marriot, however, warned against its use in the first twelve hours of severe dehydration. He felt that it results in further concentration of the blood and leads to increased acidosis. Minot, on the other hand, says there is an increased permeability of the capillaries in these toxic infants. This permits the loss of plasma fluid and protein and makes it difficult to restore the patient to a normal state of hydration. There is often a concentration of cellular elements in the blood even in the absence of transfusion and at the same time a progressive reduction of the concentration of protein. Gross edema results. She therefore advises giving only conservative amounts of intravenous fluids and early, repeated liberal transfusions of blood or plasma. She and Dodd are guided by the concentration of hemoglobin. If this increases without transfusion they immediately give blood or serum.

The giving of various fruits which are high in their pectin content and which leave an alkaline ash, has become very popular since Moro and Heister first popularized it in 1928 and 1929. Some use scraped apple with the chopped peel in and others leave the peel out. Any cook knows, however, that there is a concentration of pectin in the peel. Joslin and others give bananas. He had a series of sixty-five cases, half of which were proven dysentery, in which he used bananas. There were but three deaths although the mortality was quite high elsewhere in the same epidemic. Both powdered apples and powdered bananas are used. Powdering appreciably increases the concentration of pectin. A fresh five to twenty per cent solution is made in water or tea. A solution of pure pectin made from Certo or Sur-Gel is also very effective. Among other pectin containing foods that have been used are currents, raisins, carrots, strawberries, honey

and a pectin agar dextri-maltose mixture. Manville believes that the beneficent effects are due not only to the ability of pectin to absorb water and thus form a plastic, non-irritating stool but to the increased acidity produced in the stomach and intestinal tract by the lactic and other acids produced and to the formation of conjugation products with the toxins by the uronic acids. He has also shown that the uronic acid and pectin content of apples varies widely with the variety. For this reason it is wise to get a tart apple. He prefers the Winesap. Apple powder is usually prepared from this variety.

In giving the various fruits and their derivatives the usual routine is: An initial twenty-four hour period of only water, weak tea or five per cent glucose by mouth followed by two tablespoons of scraped apple, or mashed banana or three ounces of powder or pectin solution every two hours until the diarrhea checks. Many, including myself, give the fruit or solution, whichever is taken best, from the onset if the child is not vomiting. It is most important to control dehydration, and acidosis in the usual ways while giving the fruit. Opinions vary as to whether to give milk or carbohydrates with the fruit and in the transition diet. As Weinstein demonstrated with his rats which were kept on a high protein diet while fruits were added, if sufficient *Lacto-bacilli acidophilus* are produced it appears not to make much difference what else is given if it is not irritating. On our hospital service we use skimmed lactic acid milk as soon as the diarrhea begins to check.

Nothing has been said yet about the medicinal treatment of diarrheas. A few authors still use a cathartic if they see the patient in the first twelve hours. Marriot, Mitchell and others feel that for the most part cathartics merely irritate the mucosa and further dehydrate the patient. Bismuth has been shown to be of little value in actually coating the intestines. It was thought at one time that Kaolin changed the intestinal flora but Weinstein showed that it does not. If tenesmus is present many people still use paregoric and feel that it is of distinct benefit. The tendency seems to be definitely away from the use of cathartics.

In summary: Breast milk or lactic acid milk are suggested as preventive measures. In mild cases of diarrhea, seen early, apples, bananas or pectin mixture may be given with liberal amounts of water by mouth. If dehydration and toxic symptoms occur parenteral fluids and calculated doses of alkali should be given without delay.

TREATMENT OF PNEUMONIA*

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Due to the great forward strides that have been made in the treatment of pneumonia during recent years and the failure of most physicians to take advantage of these measures this subject cannot be brought to the attention of the profession too often. There is a great wealth of material in the literature from which much may be gleaned.

Since Pneumonia is one of the leading causes of death it behooves us to use all the armament at our command to assist our patients to regain their health. Every case of Pneumonia should be treated as an emergency just as a surgeon would consider an acute abdomen as in need of immediate and early relief. It is in observing this rule that we can hope to greatly reduce the mortality from pneumonia. Although it is more convenient and in many ways of benefit for the patient to be treated in the hospital yet the necessary steps can be carried out just as well at home in many cases. Cecil and Lawrence in their study of pneumonia in private practice state that the social stratum of the patient has little to do with the prognosis which depends instead on the age of the patient, the type of pneumonia and, most important of all, on the availability and early use of serum.

The basis of our treatment today is dependent upon the use of *Pneumococcus* antitoxin. It is estimated that 85 per cent of the cases of pneumonia occurring each year are due to invasion by the *Pneumococcus*. This includes not only the cases of Lobar Pneumonia but also Atypical or Bronchopneumonia. Cooper and her associates in 1929 divided the pneumococcus family in thirty-two separate and distinct types. Due to this study much added information has been acquired about pneumonia.

Finland, Brown, and Ruegsegger have shown in a study of 684 cases of pneumonia a relationship exists between the type of pneumococcus, the character of the pulmonary lesion resulting from the infection and the associated complications. In Lobar Pneumonia they found Types I, III, II to be most frequent with Types V, VII, VIII and IV next in order, 90 per cent of the cases occurring in these seven types. The ten percent remaining included eleven other types. In Atypical Pneumonia Type III was the most frequent with types VIII, V, I, X, VII, VI, XX, XVIII, and II in that

order. Seventy-one percent of the cases occurred in these types, the remaining being found in sixteen other types. Cases of Type I and II were most regularly Lobar Pneumonia (more than 80 percent) whereas somewhat over a third of the cases associated with Types III, IV, V and VII and considerably over half of those associated with the remaining types were cases of Atypical Pneumonia. Bacteremia was more frequent in Lobar than in Atypical Pneumonias due to the same type of organism.

Plummer states that Type I is the most common, Types II, III, V, VII and VIII being similar in incidence, the higher types making up over 50 percent of the cases. Bullowa and Greenbaum found in one thousand cases of pneumonia in children from 1928 to 1934 that Types I, VI, XIV and XIX predominated, Types III, IV and VII being frequent in occurrence. The most frequent type under six years of age after Type I is Type XIV. He also states that Lobar Pneumonia is three times as fatal in patients under two years of age as in older children, bronchopneumonia being more than twice as fatal at all ages. Types XIX and VI were only found in individuals under six years of age. Bullowa and Wilcox state that Type I is the least fatal for a child and eighth fatal for an adult. They found the most fatal types in the adult are Types II, III, XV, and XXIII and in the child Types XIII, XXVIII, XXIII and XV.

Therefore it is of prime importance from a diagnostic and treatment standpoint to obtain material for identification of the invading organism in every case where pneumonia is suspected. The sputum can be obtained in a sterile container in the majority of instances. When this is not available then one can resort to lung puncture. Sappington and Favorite found 90 percent positive suitable cultures in 60 cases of pneumonia by this method. The procedure consists of inserting a needle 10 cm. in length, size 18 to 22, into the involved part of the lung using careful asepsis, with or without local anesthesia. The material obtained in the barrel of the needle or luer by suction is then cultured. In children and infants where the most difficulty in obtaining material for typing is experienced this procedure is very helpful. Obtaining sputum by stimulating the glottis with a sterile swab should be tried. Swabs of the pharynx are not so satisfactory but are resorted to when necessary. Wittes and Bullowa recommend gastric aspiration as a satisfactory method of obtaining material for typing. In proper

*Read before the Jefferson County Medical Society.

hands the use of a laryngoscope or bronchoscope are of assistance.

The actual identification of the organisms whether from sputum directly or from cultures of the throat, lung juice or gastric contents is done by the Neufeld method. In 1933 Sabin introduced this method which is based on the "Quellung" phenomena. This consists in the swelling of the capsule of the pneumococcus when brought in contact with its type specific homologous antiserum.

After the invading organism has been identified serum therapy should be at once instituted, certain precautions being observed. The patient must first be tested for sensitivity to the product to be introduced intravenously by performing a skin, conjunctival or intravenous test. In the skin test 0.1 cc of one tenth dilution of the antiserum is introduced intradermally using normal saline solution as a control. In the conjunctival test a one tenth dilution of the antiserum is instilled into the conjunctival sac. The intradermal test is fairly satisfactory for control but the conjunctival test is more reliable, evidence of redness, swelling and itching in the eye showing sensitivity. The intravenous test is the most reliable consisting of giving 0.1 cc of antiserum diluted in 5.0 cc of normal saline intravenously. The pulse rate and blood pressure should be taken before and during the performance of the test. A fall in the systolic blood pressure of 15 mm of mercury or more and an increase in the cardiac rate of 15 or more beats per minute both occurring within five minutes or less after the injection of the test dose of antiserum being a positive reaction and contra-indicating the administration of the serum. Horsfall, Goodner and MacLeod suggest that the number of false positive skin tests with rabbit anti-serum can be reduced by using a one hundredth dilution of the serum. Positive skin and conjunctival tests indicate that administration of the serum must be made with the greatest caution. Caution should also be used in administering serum to those with a history of allergy in the family or with a history of previous administration of serum. It is contra-indicated in susceptible individuals, in those with pulmonary edema or those in extremis.

Since the subcutaneous and intramuscular routes are not very efficacious the pneumococcus antiserum should be given intravenously. The serum may be given very slowly in divided doses directly from the luer or it can be administered by mixing it with normal saline or glucose solution and introducing it through an infusion appara-

tus. In case the latter method is used the administration can be controlled by simultaneously checking the blood pressure and pulse rate at frequent intervals for evidence of reaction. This continuous method can be used for treatment of allergic individuals. Horsfall, Goodner, and MacLeod report six cases of Type I pneumonia, four of whom were sensitive to horse serum and two to rabbit serum treated satisfactorily in this way using increasing quantities of rabbit serum. An initial rate of .0001 cc of antiserum per minute is doubled every ten minutes, giving the full amount within three hours without reaction. One should always have adrenalin available for immediate use in case of a reaction occurring. When using the rabbit antitoxin the total amount indicated can be given in a single injection. Horsfall, Goodyear and MacLeod state that as much as 120 cc of antiserum can be given safely intravenously within ten minutes. As much as 300 c. c. can be given without discomfort. By the single dose method the symptoms are altered in a much shorter period. In eighteen cases the interval was reduced to seven and one half hours by the single dose method compared with an average interval of recovery in fifty-four cases of twenty-seven hours.

The amount of serum needed should be determined upon before starting treatment as much better results occur if it is all given early as has been frequently shown. Finland states that early administration also has the advantage of almost eliminating the possibility of Empyema developing in non-bacteremic cases if the treatment is begun on or before the fifth day. It tends to reduce the incidence of this complication apparently in bacteremic cases if begun on or before the third day. Cecil listed the advantages of early serum treatment. It may completely abort the disease within twelve to twenty-four hours, produces disappearance of the toxemia, prevents the spread from lobe to lobe and limits the area of infection in the lobe involved, bacteremia is prevented or checked, the leucocytes rapidly return to normal, protective bodies quickly appear in the blood, skin tests become positive to the homologous polysaccharide and the death rate is cut to approximately one sixth of the average rate.

Finland has given us a good rule to go by in estimating the dosage needed in treatment of Type I infections. This can be made a basis for treating the other types. If the patient is to be treated before the fifth day, the blood culture is negative,

and only one lobe is involved then 75,000 units should be given; if more lobes are involved give 150,000 units. If the blood culture is positive and only one lobe involved give 150,000 units; if more lobes involved give 200,000 to 250,000 units.

Finland and Dowling state that for Type II, 100,000 to 150,000 units are needed to bring about a favorable response if given before the fifth day. If the blood culture is positive give another 150,000 to 200,000 units. They state also that it seems unwise to permit more than twelve hours to elapse without giving more antibody to a patient in whom the fever, elevated pulse rate or delirium persist unless the symptoms are due to other processes. Patients with Bacteremia first treated on or after the fifth day derive no benefit from the antiserum.

Laughlin, Bennett and Spitz gave the projected dose in one administration to all of 69 cases and found that this was sufficient in forty cases, reducing the temperature to normal in nine hours. Their average dosage for the several types were 286,000 units for Type I, 390,000 units for Type II, 230,000 units for Type V, 458,000 units for Type VII, 250,000 units for Type VII, 696,000 units for Type XIV. Chills occurred in 65 percent of their cases, and there was an average normal temperature within 26 hours and a total mortality rate of 7.4 percent.

To assist us in determining the dosage indicated we have also two tests available. Francis showed that when a sufficient amount of antibodies is present in the body an intracutaneous test with the type specific homologous polysaccharide will give a positive reaction. In his opinion a positive skin test inevitably denotes recovery has begun. When the reaction is negative it denotes the need for further administration of serum. Abernathy and Laughlin et al confirm the value of this test. Abernathy found 200,000 units were required in uncomplicated Type I Pneumonia. The test is performed by injecting 0.1 c. c. of 1-10,000 dilution of the specific pneumococcus polysaccharide intradermally.

Montgomery has presented us with a urine test which gives promise of value. He has shown that the specific polysaccharide is excreted in the urine and that contact of the urine with specific antiserum will produce a precipitate. The precipitate is graded one plus to four plus indicating the need of serum. The test is also of value in prognosis, a three plus or four plus reaction in the first test being of grave prognosis. He found

that in 94 patients with a positive reaction 25 died while in 53 patients with a negative reaction only one died.

Up to the present time Pneumococcus antiserum has proven to be the best therapeutic measure at our disposal. All investigators report a great reduction in the mortality rate with its use. Horsfall, Goodner, McLeod, and Harris using rabbit serum had a mortality rate of only 13.4 percent in 67 cases of pneumonia. Excluding 13 cases of Type III with a mortality rate of 46 per cent reduces their rate for the remainder to 3.7 per cent. They concluded that rabbit Type III serum was not an efficient agent. Laughlin, Bennett and Spitz in 69 cases had a mortality rate of 7.4 per cent; Types I, II, V, VII, VIII and XIV; none dying that were treated in the first 90 hours of the disease. Ruegsegger and Benjamin report a mortality rate of 11 per cent as compared with 35 per cent in non-serum treated cases.

The response to serum therapy is rapid, the patient soon appearing more comfortable, the respiratory rate and pulse rate drop, pain is lessened and the patient frequently drops off to sleep. The serum, if given before consolidation begins, will abort the disease or, if later, will confine the infection to the site and prevent its extension. Cecil found that if the serum was given in the first 24 hours it reduced the duration of the illness from 7 to 4.7 days in studying 36 cases. The lung findings are slower to clear up than the evidence of toxemia. It also controls or prevents bacteremia.

A blood culture should always be made before serum therapy is begun since it not only is an index of prognosis, bacteremia cases being much more likely to be fatal, but it is also an index for the amount of antiserum needed and for the type of serum indicated for therapy.

Rabbit serum seems to be serum of choice because of its advantages as shown by Horsfall, Goodner, McLeod and Harris especially when the higher types of invading organisms are found. The smaller molecule of the rabbit serum permits not only better penetration into the involved lung but also is able to penetrate into pleural exudates where the antibodies have been demonstrated and the infected fluid has been shown to become sterile. Laughlin, Bennett and Spitz have shown that rabbit serum produces less reactions, only 43 per cent reactions occurring in their series from rabbit serum against 63 per cent with horse serum. When serum fails it is due to mixed infections, delayed treatment, inadequate treatment especially in bacteremia cases, extensive lesions, presence of com-

plications, or wrong type of serum.

The administration of oxygen is the next most important measure at our command to prolong the life of the patient until natural processes have been given time to overcome the disease. Since the advent of antiserum it is not now necessary to give oxygen to all pneumonia cases. However, those who do not respond immediately to serum therapy, when it is not available, or those who show signs of anoxemia at onset should always be placed in an oxygen tent. If a tent is not available administration by nasal catheter will be satisfactory. Oxygen want arises because the shallow breathing does not properly ventilate the lung, some of the blood is circulating through a consolidated airless lung, and edema fluid prevents ready diffusion of oxygen from the alveoli into the pulmonary capillaries. Cyanosis is not necessary to indicate oxygen want. Oxygen should be given before cyanosis develops. The presence of irritability, restlessness, uneasiness, apprehension, impaired memory and judgment, visual disturbances, slight headache, yawning, sighing, irregular breathing, tachycardia, stupor, delirium, nausea, vomiting and diarrhea all may be indications of anoxemia and show the need of oxygen therapy. Anoxemia occurs to some extent in every case of pneumonia. When oxygen is administered the patient soon quiets down, the respiratory and heart rate are reduced, the temperature is lowered, cough is lessened, the blood pressure is elevated and cyanosis disappears. Oxygen therapy does not shorten the course. The oxygen concentration in the tent should be maintained between 40 per cent and 70 per cent, the rate of flow averaging about six liters per minute. Faget and Martin have shown in a series of 87 cases treated without oxygen a mortality rate of 31 per cent while in 106 cases treated with oxygen the mortality rate was reduced to 17.9 per cent. The earlier the oxygen was given and the more prolonged, the lower the mortality rate.

Since the advent of sulfanilamide and its compounds much progress in chemotherapy of pneumonia has developed. Sulfanilamide seems to be helpful in pneumonia but not as effective as the antiserum. It seems to be especially helpful in treating Type III pneumonia. To be effective the dose should be sufficient to produce a concentration in the blood of 10 to 15 mg. per 100 c. c. of blood in severe cases, 5 to 10 mgs. in mild cases. Careful clinical observation for evidences of toxicity should be made. Frequent and regular temperature readings, daily hemoglobin determinations and daily complete white blood counts should be made. W. G. Reddick treat-

ed 94 cases of pneumonia, 46 of which were pneumococcus in type with death in 18, a mortality rate of 19.1 per cent. He recommends a dose of 120 grains in 1000 c. c. normal saline by intravenous drip infusion method having the advantage of avoiding gastric irritation and producing an early optimal blood concentration. In 50 per cent of his cases the temperature was below 100.0 F within 24 hours and in 61.7 per cent below 100° in 48 hours with this method. There were no complications in the 94 cases. Finland and Dublin had a mortality rate of 15.7 per cent compared to a rate of 30.8 per cent in the control group. Heintzelman, Hadley and Mellon in a series of 19 cases of Type III pneumonia, treating 9 cases with Prontylm (P-amino-benzenesulphamide) had only two deaths whereas in 10 untreated cases 5 died.

Levaditi and Vaisman believe sulfanilamide interferes with the capsule formation of the bacteria which renders them susceptible to phagocytosis. Colebrook et al state that the blood serum of patients treated with sulfanilamide shows bactericidal and bacteriostatic qualities. Bliss and Long and Gross and his associates do not believe sulfanilamide increases the phagocytic activity of the leucocytes. Coal tar products, sulphates and sulphides should not be used along with sulfanilamide. Heart disease, degeneration or cirrhosis of the liver, nephritis and anemias contraindicate its use.

More recently Whitby in an analysis of 64 related sulfanilamide compounds has advocated the use of (P-amino-benzenesulphanamide) pyridine (M. and B. 693, 693, Dagenon) as being more effective against pneumococcus and equally effective against the Hemolytic Streptococcus and Meningococcus. It has a great advantage of being relatively non-toxic and of being active in a relatively small dose. It seems to have a definite action on the capsule of the pneumococcus possessing great chemotherapeutic activity against several types, more especially Types I, VII and VIII and affords considerable protection against Types II, III and V. Fleming believes it inhibits the growth of the bacteria but has no bacteriocidal power and does not inhibit encapsulation. Evans and Gaisford found in their series of 100 cases using this drug the mortality was reduced to 8 per cent compared with 100 control cases with a mortality of 27 per cent. They recommend giving 0.5 gm. tablets every four hours for three or four days, then one tablet twice a day for two or three days with an average total dose of 12.0 gm. 2.0 gm can be given in initial dosage and 1.0 gm every four hours for an average total of 25 gm. in severer cases. Cyanosis occurred in one fourth of their cases. Barnett et al found it effective

in Types I, IV, VI, XI and XIV in children. The dose of the chemical for children varies according to age; 1-3 months: 1-4 tablet every four hours, 6 months to one year: 1-2 tablet every four hours, 2 years: 2-3 tablet every six hours, three years: 1 tablet every 6 hours, 5 years: 1 tablet every four hours. Forty cases of broncho-pneumonia were reported with only two deaths.

A still more effective line of therapy seems to be a combination of sulfanilamide and pneumococcus antitoxin. Osgood experimentally shows that the combination is more effective than either singly. He suggests that sulfanilamide with the present large dose of antiserum may appreciably lower the mortality or if given with a smaller amount of serum than that now used should give an equally low mortality at less expense. This will bear further clinical study but seems to be a promising line of therapy.

In reviewing the literature, two other measures were found that seem to recommend themselves to further investigation. They may be helpful when specific therapy cannot be used for some reason. Powell studied the effect of roentgentherapy on 104 cases of lobar pneumonia over a period of 4 1-2 years with a mortality of less than 5 per cent. The mortality rate of bronchopneumonia was reduced from 30 per cent to 13 per cent. His technic consists of giving 250 to 350 Roentgen of 0.3 angstrom unit of effective radiation (135 Kilovolts with 3 m. m. aluminum filter) anteriorly or posteriorly over an area a little larger than the involved part of the lung. If the temperature and blood count do not drop to normal in 36-48 hours a second treatment is given to an opposite field. Successively smaller doses are given if indicated. A second rise in temperature is not uncommon. Patients get relief in thirty minutes to two or three hours of much of the respiratory and circulatory distress. The pulse, respiration, and leucocyte count do not drop as rapidly as the temperature.

The second procedure is recommended by Gunther and Bland. It consists of the administration of CO₂ for two periods of hyperpnea of one minute each with a five minute rest between periods. This should be repeated every three hours when patient is awake and once or twice at night if awake. The first administration of the gas causes a coughing reflex of severe nature after which copious amounts of purulent material are expectorated. Exhaustion and refreshing sleep follows. Resolution occurs in three to five days by this method. Myocardial insufficiency is a contra-indication. Toxicity dis-

appears in 24 to 48 hours. The duration of fever was reduced to 4.3 days in bronchopneumonia and 5.2 days for lobar. The mortality was reduced to 4.3 per cent in their series of cases compared to 17 per cent mortality in those not receiving the inhalation of CO₂.

I have elaborated particularly upon the more recent developments in the treatment of pneumonia but this does not mean that other measures are not of importance. Mental and physical rest are absolutely necessary in all their obvious phases. Excellent nursing care is essential. The diet should be light and easily digestible. Fluids should be forced as dehydration is not tolerated by the pneumonia patient, and may induce circulatory collapse. Cathartics should be avoided and enemas resorted to as needed. Cardiac and respiratory failure should be treated by the various drugs at our command; caffeine, strychnine, adrenalin, atropine.

Distention is often a very serious complication and should be treated by leaving milk and sugar out of the diet. Orange juice seems to produce distention in some individuals. Stimulating enemas, turpentine stupes, pituitrin and prostigmine being resorted to if indicated. For extremely toxic cases and where there is a possibility of circulatory failure glucose should be given intravenously or transfusion resorted to.

It is not necessary to give digitalis routinely to patients but it is indicated for congestive failure or auricular fibrillation and should be given to persons having pre-existing myocardial or valvular damage. Cohn and Lewis state that giving digitalis does not seem to influence the course of events in lobar pneumonia, the outcome depending on the severity of the disease.

Hydrotherapy is indicated for control of fever. If the leucocyte tends to drop Wilson recommends giving liver extract intramuscularly.

DISCUSSION

A. C. McCarty: Dr. Hurst is to be complimented, not alone on the excellence of his paper but upon the manner of the presentation, also. So completely has he brought his subject up to date, that the paper was finished only today, and I have had no time to write a discussion. Emphasis on some of the most important points made by Dr. Hurst and the mention of a few additional matters which time did not allow him to include, are all that I shall essay at this time.

I wish that the subject of Pneumonia had been scheduled for our next meeting, after the annual sessions of the College of Physicians in New Orleans. There the topic will be covered at round table, clinic, lecture and discussion,

and the viewpoint of many men presented. (This meeting has since taken place, and very little was added to Dr. Hurst's splendid resume). The progress of the "Captain of the Men of Death," Pneumonia, is very rapid. If you do not think so, try teaching the subject to the students which I have the pleasure of doing yearly. Recent events have been especially kaleidoscopic. The advent of serum and chemo-therapy may be compared favorably with the use of arsenicals in spirochaetal diseases, insulin in diabetes, and liver extract in pernicious anemia. Pneumonia will no longer rank third as a cause of deaths—Nationally and in Kentucky.

In the matter of the home treatment of pneumonia, I am inclined to disagree with the essayist, especially where serum is being used. While it is possible to simulate a hospital in the home, it is usually more costly and less satisfactory to do so. Intravenous medication, serum administration, oxygen therapy and emergency intern services are some of the more important home handicaps and hospital advantages. In fact, I have hoped for some years that we might have a hospital pneumonia service in Louisville, as has been established elsewhere. This means constant 24-hour service, with at least one intern remaining up all night and sleeping by day.

In making an early diagnosis I should like to add one method, not mentioned by Dr. Hurst, of great value in children and unconscious patients. This consists of a rubber tube placed in the back of the throat or upper esophagus. By means of a suction syringe and sterile receiving bottle, material may be aspirated and collected easily, thus aiding early typing.

Dr. Bulowa has called attention recently to the fact that highly concentrated doses of type I serum will give as favorable results in the treatment of cases, seen after four or five days of the disease, as when administered earlier, especially in smaller doses. This may be true of other types also, and should lead one to push forward with serum and chemical treatment, even though the patient be seen late in the course of the disease.

Price and Meyers of Detroit report in the current issue of the Journal of the American Medical Association favorable results in the use of sulfanilamide against the pneumococcus. Sulfanilamide has been of great help in streptococci and Type III pneumococci pneumoniae.

Sulfanilamide has the further advantage that it may be administered subcutaneously, where oral medication is inadvisable. This is a virtue which even sulfapyridine does not possess. Sulfapyridine with sodium added may be given intravenously, but not a drop should be allowed to get out of the vein, as it is most irritating.

Sulfapyridine was reported from abroad so favorably that one could hardly believe the claims. Careful studies with this same drug in this country (some made here in the Louisville City Hospital) have borne out all early claims by Whitly and others in England. No drug could be as wonderful as the credit given sulfapyridine in the press recently, attributed to a Boston pediatrician. Pneumonia has not disappeared entirely since sulfapyridine has appeared on the horizon. Pneumonia is in retreat, however—definitely on the run where serum or sulfanilamide or sulfapyridine, or a combination of these has been used intelligently. Sulfapyridine has been Council approved and placed on the market commercially during the past fortnight. Cost of treatment, with single tablets priced at twenty to twenty-five cents will run in the neighborhood of \$25.00 to \$35.00.

Dr. Hurst mentioned the use of X-ray in therapy. John R. Carty stresses this in a recent article, and it would seem that X-ray may have replaced diathermy, short wave and other physiotherapy measures in treating Pneumonia.

I hope that everyone present will follow all of Dr. Hurst's suggestions, so that Pneumonia may be conquered to a great degree in seasons to come.

S. C. Frankel: Looking back some thirty years ago we find quite a change in the therapy of pneumonia compared to the present time. I remember how Dr. Cecil, Dr. Marvin, Dr. Kelly and others of our good practitioners of that time argued about the cardiac depressants and cardiac stimulants. One side would contend that tincture of aconite root was the best drug to slow the heart while the others were equally positive that tincture of digitalis was the drug of choice. Both agreed, however, that whiskey was the drug to use at all times.

Then some twenty years ago we treated pneumonia at the temporary City Hospital on Sixth street, by placing the patient's head out the window with the rest of his body in the ward. The examination was made in the room with protection from the cold coming in. The favored remedy then was creosote, especially, creosote carbonate in large doses. The atmosphere of dust and smoke in the neighborhood was so thick that many times we could hardly tell if the patients were white or black.

At the present time with such rapid changes in the treatment of pneumonia it is difficult to keep abreast with the therapy. I disagree with the essayist that patients can be treated as well at home as at hospitals. The disease is of short duration and the expert care the patient would receive in an up-to-date hospital is a major factor in the recovery of the patient.

The sputum is typed immediately on en-

trance to the hospital and the blood is taken for culture. If treatment is started after 72 hours, half the battle is lost. Give the patient serum early, give large doses and give often—4 to 8 hours depending on the toxemia. Double the usual dose if bacteriemia is present. Sulfanilamide or better, sulfapyridine is indicated in most cases. Ten grains of sodium bicarbonate is given with each dose. In anoxemia give oxygen as long as the patient's condition indicates the use of same. Air containing approximately 50 per cent oxygen is most helpful. It protects the heart, quiets the patient, helps respiration and certainly assists carrying the patient through the disease.

J. Murray Kinsman: I am afraid the essayist is going to be alone in treating pneumonia patients at home. I do disagree for the same reasons given by the previous "discussors." My purpose in discussing his paper is to talk about the treatment of pneumonia with sulfapyridine. When this drug was introduced through Merck, a supply was obtained by the City Hospital. Since early January, we have had 40 cases treated by that drug alone. They did not receive serum and are therefore suitable cases to compare with serum treatment. Those cases have not yet been statistically analyzed. There were two deaths—a mortality of 55 per cent—which fits in closely with the rate quoted by the English authors.

Many types have been treated, some common, some uncommon, but as yet the statistics are not analyzed. In the beginning we did not know what dose to use, but gave 2 gms. as an initial dose, followed by 1 gm. every four hours. At present, we are using 4 gms. as the initial dose, followed by 1 gm. every 4 hours. It is remarkable to see what happens to the temperature. We must remember that at the City Hospital, patients often enter on the fourth to seventh day of illness and have a spontaneous crisis at that time: therefore it is very difficult to know whether the crisis is due to the drug or whether it is just spontaneous. However, a very large proportion of them entered the hospital early to their illness. In those who came in early, the temperature fell as a result of the administration of the drug which makes us think that it is not all coincidence. Usually a remarkable change occurs in six hours. If the drug is given at six o'clock at night, the next morning the temperature is normal. The temperatures look surprisingly like ordinary good old-fashioned crises.

There are many queer things about the drug and its effects. Signs in lungs do not always clear up more quickly than in the natural course of events. Some patients have gone home with unresolved pneumonia. If empyema exists it will not be cured. The concentration of the substance (sulfapyridine) in the blood has been

examined. There is a remarkable variation from patient to patient. Patients will have a fall in temperature with five milligrams of drug per 100 c. c. or with 2 mgs. per 100 c. c. of blood. Reports sent out by Merck, which were obtained by that company from doctors, advocate a level of 3-6 mgs. as the optimum. We have had many cases whose level was below that. The optimum dosage has not been established. It may be that 8 mgs. is too much. I took it myself a while back, with type 4 pneumococcus. It did not bother me a bit. The next day my stomach was pretty well upset. We had pretty much the same experience with patients. The big thing is that an initial dose will usually cause a crisis. Time alone will tell what the best dose is and exactly what it will accomplish. With empyema fluid there is concentration 2-3 times what it is in the blood although the empyema is not cured. This is yet to be explained. There were some bad effects. There were two cases of hematuria, but they cleared up when the drug was stopped.

There are a lot of other interesting things about the drug. Dr. McKhann certainly exaggerated its value, as reported in the lay press, but I do believe the early hopes of the English workers will be substantiated. The combination of serum and sulfapyridine is the preferable method of treatment at present, but frankly I would not be surprised if in the majority of cases sulfapyridine did not supercede and replace serum.

Robert Cohen: I just want to add a point in typing pneumococci. The late Dr. R. Jaffe, pathologist of Cook County Hospital would make us do the bile solubility test on the sputum of pneumonia patients. The sputum being incubated 30 minutes with bile solution. In this way we knew if we were dealing with a pneumococcus or another organism causing the pneumonia. This saved us hours of work of running through the various groups of pneumonia in which the 32 types are classified therein. To wait over two minutes for the appearance of the "quellung" phenomena in each type is hardly considered good technique if the sputum does not contain pneumococcus as original shown by the bile solubility test.

Another point, oxygen is still a good medium for these cases. There are many different ways of giving it. At the last state medical convention, Dr. M. Flexner demonstrated a metal nasal catheter for oxygen conveyance. That plugged up both nostrils and stopped a certain amount of drainage. I introduce this Buccal-Oxygen Catheter which does away with obstructing the nasal passage. Oxygen is humidified by passing through water bottle and conveyed by a Y tube to my buccal catheter and the oxygen is imbibed orally while the catheter is against the buccal mucous membrane. The instrument is brass tubing with inner perforations. It fits into

the mouth comfortably and allows the oxygen to go through the perforations to be imbibed. The nasal passages are not plugged and the tenacious mucus can be discharged.

This device is to be published in the *Journal of Pediatrics*. Dr. M. Blatt of the Children's Division of Cook County Hospital is running a test series for me.

Arthur T. Hurst, (in closing): I want to thank my friends for their discussion of my presentation but wish to state that they have the wrong impression about my treatment of pneumonia patients at home. I, too, prefer to send my patients to a hospital for treatment because of the definite conveniences and advantages there. However, I want to impress upon you that, if for any reason, the patient cannot be sent to a hospital, the treatment can be carried out successfully at home. It will naturally require more of the physician's time for home treatment but it can be done successfully whether in the city or in the country. If you wish to save trips to the home, then test your patient intravenously with rabbit serum and, if he is not susceptible to a reaction, give the required amount of anti-serum in one dose.

If one desires to use sulfanilamide then give it intravenously in a saline-glucose solution and avoid gastric disturbances. This method also allows for a more rapidly effective therapeutic concentration of the chemical in the blood stream.

Dr. Kinsman has given us a very interesting and timely report on the use of sulfapyridine at the Louisville City Hospital. We are all very much interested in it. Still we should rely on pneumococcus antiserum as our mainstay in treatment until we definitely know how effective and safe sulfapyridine is. A combination of antiserum and sulfapyridine seems to be the most promising therapy in the future. I had the pleasure of seeing some of the patients treated with sulfapyridine at the City Hospital. It is remarkable how some of them seemed to improve. One wonders whether or not there might be some antipyretic effect from the drug, especially since the lung findings themselves do not clear up so readily. I would like to suggest the use of carbon dioxide inhalation, as recommended by Gunther and Bland, in those cases treated with sulfapyridine. This might produce a rapid clearing up of the lung findings.

I eliminated artificial pneumothorax therapy from my paper because it does not seem to have enough to recommend it. It is effective, however, for the relief of severe pleuritic pain and dyspnea and might rarely be needed for this purpose.

The biggest drawback to the use of antiserum seems to be its cost. It has been my experience, however, that the family can obtain it if its

value is impressed upon them sufficiently. If poor people cannot afford to pay for antiserum and pay the physician too, then it is better for the physician to use the antiserum and do without his fee. There is much less wear and tear on the physician when he resorts to antiserum therapy. Pneumococcus antiserum saves time and trouble as well as lives. One procedure to make antiserum cheaper is for the states to make their own and furnish it at cost. New York and Massachusetts furnish it at 100,000 units for thirty-five dollars which places it within the means of practically everyone.

BRONCHIAL ASTHMA*

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Bronchial asthma may be defined as a clinical syndrome characterized by recurrent paroxysmal attacks of difficulty in breathing accompanied by wheezing and prolonged expiration, having a tendency to familial occurrence and often dependent upon an allergic basis.

ETIOLOGY: Asthma is a common disease. It occurs at all ages and about equally in both sexes. It is widely distributed geographically. It develops as the result of a constitutional predisposition of unknown nature influenced by heredity. Other manifestations of the same predisposition are hay fever, atopic eczema, perennial allergic rhinitis, etc. We believe that this predisposition is of dual nature, one factor determining that the patient shall have asthma rather than some other manifestation of allergy and the second factor determining that the patient shall become sensitized to one or more of the numerous foreign substances in his environment.

An asthmatic attack may be precipitated by (a) non-specific factors, such as respiratory infections, the inhalation of smoke, inert dusts, irritating gases, etc., by overeating of food in general, laughing, going to sleep, physical exertion, changes in temperature and perhaps even by psychic and nervous factors, and (b) specific exciting agents to which the patient is allergic, including house dust, feathers, animal danders, pollens, orris root (in face powder), fungus spores, silk etc., which he inhales, as well as foods, drugs or other substances which are ingested or injected.

Weather conditions influence asthma. Some patients are worse in the winter because of the increased incidence of respiratory infections at this time of the year. Cold.

*Read before the Jefferson County Medical Society.

damp, rainy weather has an unfavorable influence on some asthmatics but not on all. A rain may wash the air free of pollen and benefit some pollen-sensitive cases.

PATHOLOGICAL ANATOMY: The pathological findings vary to some extent in different individuals and pathologists are not entirely in agreement concerning the question of whether or not the findings are pathognomonic of the disease. The lungs are often found to be very emphysematous and may not collapse as they normally do on opening of the thoracic cavity. On microscopic section the bronchi may be found to contain an exudate consisting of polymorphonuclear neutrophils and eosinophiles, lymphocytes, epithelial cells, Curschmann spirals, Charcot-Leyden crystals and mucus. Chronic inflammatory changes are found in the walls of the bronchi. The basement membrane is often thickened and hyalinized, the smooth muscle layer and mucous glands hypertrophied and infiltrated with inflammatory cells. Some of the alveoli may be dilated and atelectatic areas of lung tissue are sometimes observed.

PATHOLOGICAL PHYSIOLOGY: It is evident that an asthmatic patient in an attack is having difficulty in getting air into the lungs and often still more difficulty in getting it out of the lungs. The obstruction to the easy flow of air is located in the smaller branches of the bronchi. The larger bronchi are patent as may easily be seen by bronchoscopy.

Of the theories which have been advanced in explanation of the nature of this obstruction, three are deserving of consideration:

(1) Exudate in the smaller bronchi. Exudate is undoubtedly present. Patients expectorate it and it is found at autopsy. Exudate, however, is present also in bronchitis, bronchiectasis, lung abscess, etc., in patients without asthmatic symptoms. It undoubtedly contributes to the symptoms but will not explain them entirely.

(2) Spastic contraction of the smooth muscle in the walls of the smaller bronchi resulting in a narrowing of their lumina. This theory is in agreement with (a) the presence of smooth muscle fibers in the small bronchi, (b) the spastic contraction of the bronchi of guinea pigs in anaphylactic shock, and (c) the relief of asthma produced by epinephrine which dilates the bronchi of experimental animals by relaxation of the smooth muscle in the walls of the bronchi.

(3) Congestion and edema of the mucous membrane of the smaller bronchi resulting in swelling and narrowing of their lumina. This conception is in agreement with (a) The congestion and edema found in the nasal mucous membrane in allergic rhinitis, (b)

The action of epinephrine, which relieves congestion and edema and is capable of relaxing bronchi in a state of normal tonus as well as in a state of spastic contraction, and (c) The failure to demonstrate smooth muscle contraction in allergy of the atopic type.

Asthmatic attacks of course may not all depend upon the same mechanism, but the evidence at present available indicates that the congestion-edema hypothesis offers the best explanation for the major cause of the obstruction.

The allergen may reach the sensitive tissue directly through the inspired air, or indirectly through the circulation after absorption from the alimentary tract, respiratory tract or elsewhere.

SYMPTOMATOLOGY: Asthma is a disease characterized by recurrent attacks with intervals of freedom, or relative freedom, between attacks. The duration of the attacks and the intervals between them are subject to great variation. Attacks may be separated by several hours, days, weeks, months or even years and may last from an hour or less to several weeks. They may occur at any time but there is a definite tendency for the attacks to occur more frequently at night. An attack may begin suddenly, the patient being awakened with a sensation of heaviness or constriction in the chest, cough, difficulty in breathing and wheezing. He invariably sits up or gets up out of bed because breathing is easier in the upright posture. After a while he may be relieved and go back to sleep. This relief may occur without medication or may follow the smoking of some "asthma powder" or the taking of ephedrine or other drug.

In other instances the attack begins more gradually and may be preceded by premonitory signs, such as the symptoms of a head cold, sneezing, itching of the nose, cough, dryness of the throat etc. The signs and symptoms of a well developed attack are quite characteristic. The expression is tense. The patient talks very little; he hasn't the breath to spare. He prefers to sit up and to lean slightly forward. His attention is directed toward his breathing which is labored. The shoulders are held high, the chest prominent and in the position which it normally occupies at the end of inspiration. The accessory muscles of respiration are strained to the utmost. Breathing is not rapid; it is shallow and is performed with the chest in an expanded condition because the lungs are filled with air which the patient is unable to expel. Both inspiration and expiration are performed with difficulty; expiration is espe-

ially difficult and is accompanied by wheezing sounds which are often audible without a stethoscope. Cyanosis is present only in very severe attacks. Fever is usually absent but may be present, especially with respiratory infections.

A severe attack of asthma is a very unpleasant experience. Thomas Willis, in 1679, said "Among the diseases whereby the region of the breath is wont to be infested, if you regard their tyranny and cruelty, an asthma—doth not deserve the last place; for there is scarce anything more sharp and terrible than the fits thereof; the organs of breathing, and the precordia themselves, which are the foundations and pillars of life, are shaken by this disease as by an earthquake, and so totter that nothing less than the ruine of the whole animal fabrick seems to be threatened."

As the attack subsides the cough becomes productive and the breathing easier. If the attack has lasted for several days the patient is weak and exhausted from the intense muscular effort of breathing and loss of sleep. After a rest and sleep, however, he generally feels well and returns to his usual occupation. With the passage of time the attacks may become more severe and occur more frequently. In some cases the patient enters the stage of chronic asthma in which the attacks occur every night and often during the day.

The physical signs during an attack are characteristic. The general appearance of the patient, his preference for the upright posture, the dyspnea with prolonged expiration and wheezing, the prominent, expanded position of the chest are typical. The percussion note is hyperresonant, the area of cardiac dullness greatly diminished and on auscultation sonorous and sibilant rales may obscure all other sounds. The expiratory phase is prolonged and accompanied by dry rales. Between attacks there may be no abnormal physical signs although there is a tendency for the emphysematous type of chest to persist to some extent between attacks.

DIAGNOSIS: If the patient is seen during an attack the signs and symptoms are usually so characteristic that the diagnosis is obvious. The presence of other manifestations of allergy in the patient or his family is of some diagnostic value. If the symptoms are promptly and definitely relieved by epinephrine the condition is bronchial asthma practically without exception.

In the differential diagnosis we may have to consider 1. Aneurysm of the aorta or other type of mediastinal tremor with pressure on the trachea or bronchi, 2. Foreign bodies in the bronchi, 3. Tumors of the lung

including papillomata of the bronchi, 4. Enlarged tracheo-bronchial lymph nodes, 5. Enlarged thymus, 6. Substernal goiter, 7. Emphysema, 8. Chronic bronchitis, 9. Cardiac asthma, 10. Pulmonary tuberculosis, 11. Hysteria, 12. Bronchopneumonia, 13. Spasmodic croup, 14. Diphtheritic croup, 15. Laryngismus stridulus, 16. Retropharyngeal abscess.

While the diagnosis of asthma is usually not difficult the identification of the various specific causative factors responsible for the attacks in a given case is often not so easy. Four general methods are available for this purpose. 1. The clinical history, 2. Physical examination, 3. Skin tests and 4. Other tests.

The history is very important. The date and nature of the onset should be obtained. Dates rather than elapsed time should be used in describing past event. "Four months ago" may turn out to be over five months ago, namely September 1st, which is important because this is the peak of the ragweed pollen season in many locations. All the elapsed time must be accounted for. If the patient was free of symptoms for several months or years it is important to know when and why. Perhaps he changed his occupation or lived in some other geographical location or maybe his pet animal died. The influence on symptoms of vacations, hobbies, occupation, etc. should be ascertained. Seasonal influences are important especially as they relate to the pollination of plants, sporulation of fungi and to prevalence of respiratory infections. A family history of allergic manifestations is of value and so is an account of past health, surgical operations and previous treatment.

The physical examination may reveal foci of infection in the upper respiratory tract but is of no value in the identification of extrinsic causative factors.

Skin tests are often of practical value in asthmatic patients. The tests are performed by the scratch or intradermal methods or both. One or more positive tests are obtained in the majority of cases. Positive tests, however, are not always of clinical importance. The tests should always be correlated with the patient's clinical history and with other tests enumerated below. It is desirable that all asthmatic patients be tested because important causative factors are often thus revealed.

Other tests include the environmental test, which consists in making changes in the patient's environment such as sleeping in a relatively dust-free room, getting rid of feather pillows, dogs, cats, etc. Test diets are also of value in determining the

causes in some patients. Food diaries serve a similar purpose.

TREATMENT: The treatment of asthma may be divided into 1. The management of the case between attacks with the object of preventing future attacks and 2. Treatment of the patient during an attack with the object of providing immediate, palliative relief.

1. MANAGEMENT BETWEEN ATTACKS:

(a) **AVOIDANCE OF THE CAUSATIVE FACTORS.** Foci of infection and structural abnormalities of upper respiratory tract should receive appropriate treatment. Surgical treatment may be necessary in some cases to remove or drain infected foci. Such surgical treatment should be instituted provided the local condition itself requires it, but seldom, if ever, for the sole purpose of treating the asthma. Avoidance of such causes as dogs, cats, feathers, etc. is relatively easy. Patients sensitive to orris root may change to non-allergic cosmetics. Some causes are difficult to avoid. In order to escape pollens effectively it is necessary to travel to some location where those pollens to which the patient is sensitive are absent or present in low concentration. House dust is also difficult to avoid although a relatively dust-free sleeping room may be prepared. Avoidance of foods is easy or difficult depending largely upon the particular foods involved.

(b) Desensitization is often necessary in patients who are sensitive to common substances which are difficult to avoid, such as house dust, pollens, fungus spores, etc. This procedure is carried out in the same manner as in hay fever, the patient receiving a series of injections of an extract containing the common, unavoidable allergens to which he is sensitive.

(c) Non-specific methods of treatment may be used in those cases in which specific causative factors have not been identified or in which specific methods have not been completely effective. These include:

- (a) Vaccines, either autogenous or stock.
- (b) Tuberculin.
- (c) Autohemotherapy.
- (d) Iodine by mouth.
- (e) Iodized oil instilled into the bronchi.
- (f) Fever therapy.
- (g) Deep X-ray therapy.
- (h) Breathing exercises.
- (i) Bronchoscopic drainage, etc.

2. **Treatment of the attack:** If the cause is known it should be avoided as much as possible. Patients with pollen asthma improve in an air filtered room in a hospital

(or at home). Feathers, animals, dust, etc. should be avoided if the patient is allergic to them.

Many mild attacks are treated at home by the patient himself who takes ephedrine or epinephrine and in an hour or so goes back to sleep—if the attack occurs at night, as is often the case.

If the attack is very severe the patient may be relieved more promptly and be treated to better advantage in a hospital. There are several reasons why this is true, among them the fact that removal to a hospital may provide escape from some known or unknown causative agent in the patient's home.

The patient should be made as comfortable as possible. He may be propped up in bed or may be allowed to sit in a large easy chair for a time. The fluid balance must be maintained. In extremely severe cases it may be necessary to give fluids parenterally. A soft, light diet is appropriate. Foods to which the patient is allergic should, of course, be avoided if they are known at the time.

The most effective drug in relieving an asthmatic attack is epinephrine which may be given in 1-100 dilution by a vaporizer, the vapor being directed into the throat and inhaled deeply into the lungs. Epinephrine in 1-1000 dilution is given hypodermically, the dose to give being the smallest quantity which will provide adequate relief. This dose may be repeated as often as necessary without ill effect. In some severe cases, after repeated administration, epinephrine may temporarily become ineffective. In such an event it should be discontinued but may later be administered again.

Ephedrine is less effective but its action more prolonged than that of epinephrine. It is of value in the less severe attacks.

Iodine is a very valuable drug in asthmatic patients. It liquefies sputum and enables the patient to expectorate more easily.

Nitrohydrochloric by mouth seems to benefit some cases.

An oxygen tent in severe cases with cyanosis is of some value but not as much as one might expect. A mixture of helium and oxygen has been used to tide the patient over a very severe attack.

Morphine should be avoided because of its depressant action upon respiratory center and because of the possibility of habituation. Its use is probably justified in certain very severe attacks in patients in whom epinephrine has become ineffective. In these cases it may be given in small doses.

Other remedies include caffeine, ether and oil per rectum, ether anaesthesia by inhalation, aminophylline, etc.

DISCUSSION

James W. Bruce: Bronchial Asthma usually begins before the 10th year, and is rather common in infants after one year. Infants with eczema frequently develop asthma after they are 2 or 3 years old. Foods are the more common causes of asthma in the first 3 or 4 years of life; after that inhalants are more common.

Heredity is a common factor—various authors claim 40 to 75 per cent of asthma sufferers will show family histories of some form of allergy.

Treatment of asthma consists in:

1. Avoiding upper respiratory infections because such infections frequently initiate asthmatic attacks.

2. Finding the specific cause of the asthma and eliminating it.

3. Drugs, e. g. Iodides, Adrenalin, Ephedrin.

4. Change of climate.

Acute upper respiratory infections can be minimized by paying careful attention to ventilation of school and sleeping and play rooms; by dry warm clothing; by high vitamin diets; and by providing adequate drainage of the nasal cavity by removal of tonsils and adenoids if necessary. Mixed vaccines either stock or autogenous are of some value. X-ray treatments of the nasopharyngeal region sometimes produce remarkable results.

Finding the specific cause or causes of asthma can be accomplished by skin testing, by elimination diets, and by careful observation of the environment by intelligent observant parents and attendants. Skin testing is difficult in children and for that reason is not employed as extensively as with adults. Before resorting to skin tests most parents have tried elimination diets and removal of suspicious objects from the environment. Sometimes these methods are successful. All pets, fur wraps, rugs, curtains and draperies should be dispensed with if possible. Rubber covers for pillows and mattresses are helpful. However, skin tests will usually have to be resorted to sooner or later. Sensitization in children is usually multiple and not all substances to which the child may be found sensitive are causing asthma. It requires good judgment to decide which are the offending articles.

Many cases of asthma give remarkable response to heavy doses of Iodides both during attacks and as preventive between attacks. Many patent asthma remedies are composed largely of Iodides: Saturated Solution Potassium Iodide may be given 3 to 5 drops three times a day. Also, tincture Iodine may be given in the same dosage. The action of the drug is empirical, but it gives relief in some cases where everything else has failed. I have seen a number of children take Iodides for years without

bad effect, and with relief from asthma. However, as soon as the Iodide is stopped, asthma is likely to return. Ephedrin, if given early and frequently will often keep asthma under control. Many children are kept comfortable by taking one or two doses a day. Adrenalin 1—100 dilution as inhalation is very effective. It has about the same effect as 1 c. c. 1-1000 dilution subcutaneously. Children come to have great dependence on this form of medication, and like to carry the inhaler with them all the time. Mothers of asthmatic children should be taught to give hypodermics of adrenalin and instructed to give them in small doses early in the attack as this is the best way to head it off.

The effect of the dry climate of New Mexico and Arizona on asthma is spectacular. I have seen four boys go to that climate, who had been invalidated by asthma and after staying two or three years, gain 20 to 50 pounds in weight and come home free of asthma. During their stay in that region no medication or diet was used. They were all boys who had had everything science could offer before going to the Southwest, but had gotten no benefit. Just how this climate affects asthma is problematical, but it would seem that the dry pollen free air kept them free of colds and allergic irritation and after several years in this climate their tissue cells had become desensitized.

Armand Cohen: One point that for a long time confused me and only recently have I found an explanation that is satisfactory, i. e. in the intrinsic asthma the question arises: Are these asthmas due to allergy or to infection? The bronchoscopist has given us considerable information in these cases in that the bronchoscopic examination shows a tracheo-bronchitis with the outpouring of serum. In a study which I recently reviewed, they found in the examination of large groups of lung cases there may be the same pathology, but only 25 per cent had asthma, which seems convincing that asthma would be present only if an allergy has developed or existed. In other words, infection per se is not the cause of the asthma. But an allergy due to foreign material is the most likely cause.

Dr. Simon mentioned the use of helium. I have had one experience in which I thought it was a life-saving measure, i. e. in a woman who was adrenalin fast, and who was brought to the Norton Infirmary. She was unconscious, weak, and pulseless. We rigged up an outfit for her using 80 per cent helium and 20 per cent oxygen. This woman recovered. If it were possible to have a regular helium tent, it would be very desirable for this community, not only for the treatment of asthma in status, but for other respiratory conditions.

I do not believe that Dr. Simon mentioned

the use of adrenalin in oil as one of the newer types of therapy. It seemed to have some advantages in the two patients which were treated at the allergy clinic in this hospital. The product is not as yet on the market and the material which I used was furnished by Winthrop and Company. One of these patients who had taken adrenalin every few hours was able to go two days without additional medication.

Frank A. Simon, (in closing) I have nothing else to say except that when asthma improves by changes of climate it is probable that when the patient moves from one part of the country to another, he escapes from things. It is probable that the air there does not contain something it does here, and that it isn't the weather. We know that mold spores have recently come into prominence because of their relationship to asthma and we know that they have a marked geographic distribution. In the midwest grain growing states, their concentration is higher than on the Atlantic coast. Such things may be partially the cause for improvement of asthma rather than the climate.

THE PRACTICAL APPLICATION OF THE ELECTROCARDIOGRAM*

J. MURRAY KINSMAN, M. D.

Louisville

Electrocardiography is a much misunderstood science, for it is essentially a science rather than an art. Although there are a few doctors whose attitude toward it is expressed in the satiric definition: "A cardiologist is a doctor with an electrocardiograph," yet generally speaking the tendency is toward the other extreme, so that many doctors and most laymen as well, who know anything at all about it are prone to regard "having an electrocardiogram taken" as the final conclusive test as to whether or not there is heart disease. It is surprising how many otherwise well-informed doctors believe that valvular disease can be diagnosed by an electrocardiogram. To the uninitiated, an electrocardiogram holds so much of mystery that everything is expected of it. I shall attempt, as best I can to outline what information can be obtained from an electrocardiogram as well as to point out what cannot be; to discuss the conditions under which material help may be expected in either a positive or a negative way; and to emphasize those circumstances in which the electrocardiogram serves merely to corroborate what one has learned from clinical observation alone, and so adds really very little to the picture.

In the early years following Einthoven's invention of the string galvanometer, the in-

strument was used chiefly for the detection of abnormal rhythms and erroneously, as an index of the heart size, for it was early found that the relative positivity or negativity of the electrical currents set up by the heart's action, was influenced very greatly by the size and relative position of the heart in the chest. Einthoven himself developed a sort of a law, commonly referred to as "Einthoven's triangle" in an attempt to explain and put to practical use that observation. And to this day, although modified frequently, and seriously disputed rather recently, yet by and large that "law" still stands today as one of the basic tenets of the science. Electrocardiography was not the pioneer method in the study of irregularities of the heart, however, for MacKenzie in his Birmingham days had developed the polygraph or sphygmograph and, from a study of the records made by this machine, had discovered the significance of such irregularities as premature contractions, auricular fibrillation, and heart block. But the electrocardiograph did further elucidate such things as the site of origin of the premature contractions, the nature of auricular flutter, and the true nature of auricular fibrillation as well as certain other abnormalities of rhythm and of conduction which, by the very nature of the machine, it was capable of analyzing, whereas the polygraph—while superior in its ability to show pulse form—was necessarily restricted to the study of the pulse as distinguished from the heart.

As cardiologists learned more of the mechanism of heart irregularities, attention gradually became focused less and less on them and more and more on the form of the individual waves or complexes. It became increasingly apparent to those who were working with this instrument, that by studying closely the form of certain of the complexes in the electrocardiogram, information of great value could be obtained concerning the condition of the heart muscle and of the coronary arteries and the introduction of precordial or chest leads (lead IV) proved of material value in this direction so that today, one may summarize the status of the electrocardiogram in practice by stating that while it is of value in elucidating the exact nature of the irregularity in a relatively small proportion of cases of irregularity of the heart, its greatest use at the present time is in elucidating the anatomical—not functional—state of the heart muscle and of the coronary arteries. It cannot be too strongly emphasized that it is of no value whatsoever in determining the functional capacity of the heart, its ability to do its work, and of little value in diagnosing valvular lesions; those things remain entirely clinical problems.

*Read before the Jefferson County Medical Society.

The principles upon which electrocardiography is based are really very simple. They rest upon two basic facts; (1) the impulse which causes the heart to contract is of an electrical nature; it is transmitted throughout the entire body and can be "collected", so to speak, by the application of electrodes to suitable parts of the body. The electrodes being connected to a sensitive galvanometer, the movements of its string can be photographed upon moving film. What one sees when one reads an electrocardiogram is a photographic record of the shadow of the moving string of a galvanometer, or of a moving beam of light reflected onto the film from a mirror suspended on a galvanometer string. (2) The electric impulse in the normal regularly beating heart is always initiated in the same place and always follows the same pathways through heart muscle and through a highly specialized conducting tissue. As the impulse follows this same identical pathway for beat after beat, certain changes occur—all within the space of half a second or less—in the magnitude of the electric charges of one part of the heart relative to another, and these changes are recorded in the movements of the galvanometer string. One part A of the heart muscle which at one instant is electropositive with respect to another part B, becomes a fraction of a second later, electronegative to the same part B, and this change is recorded in the finished electrocardiogram first by a shift of the string shadow to a position above the baseline (which represents the complete electrical neutrality or inactivity of the whole system) as electropositivity develops, followed by a shift to a position below the line as negativity develops; this whole change normally takes only a fraction of a second.

The sequence of events in the contraction of the heart is as follows: The impulse is originated in the sinoauricular (s-a) node, a bundle of highly specialized tissue located at the junction of the superior vena cava with the right auricle. From here (the pacemaker), it spreads through both auricles (much like waves spread from the spot in a still pool of water where a stone is dropped in), eventually reaching the junction of the auricles with the ventricles. At this point is situated the auriculo-ventricular (a-v) node which then "picks up" the impulse and then sends it on through the attached "bundle of His" into the ventricles. There is a delay at this point, normally not exceeding one-tenth of a second, during which the electric state is at rest or "in neutral", so to speak. The impulse then divides into two bundle branches one of which supplies the left ventricle and

the other, the right. These branches then subdivide into smaller and smaller branches, piercing the heart muscle and ending in the small arborization fibre—the "Perkinje fibres" under the pericardial surface of the ventricles.

Now, this sequence of events produces a corresponding sequence of electrical changes which, where recorded photographically, produces a curve which we call the electrocardiogram. Long ago, for convenience sake, arbitrary letters were given to the individual waves for identification purposes, and this system of lettering has been followed ever since. Each wave represents some definite stage or phase of the passage of the impulse along its monotonous course. The first upstroke, the "P wave," is the stage of auricular activity; the inactive period which follows the period of electrical inactivity, means that the impulse is passing through the a-v node and the bundle of His; the next combination of upstrokes and downstrokes—the QRS complex, represents the spread of the excitation wave through the bundle branching system, i. e. through the ventricular mass; the final phase, the T wave, indicates a recession of the impulse through the ventricular muscle. The QRS and T groups of complexes represent, then, ventricular activity, while the P wave represents auricular activity.

It is evident, then, that any abnormal condition of the heart which interferes with this pathway will be revealed by corresponding changes in the shape, form or duration of one or more of the individual complexes. Conversely, abnormality of the complexes indicates interference somewhere with the normal orderly conduction of the excitation wave. This is the basic underlying principle upon which the whole science of electrocardiography is built. Illustratively, if a premature contraction originates in one ventricle, the whole ventricular complex will be distorted, because the pathway has been changed; if there is a delay in auriculo-ventricular conduction, the interval between the P and the QRS waves will be prolonged; if a portion of the ventricular muscle becomes infarcted, the QRST complexes will be deformed—again because the pathways have been changed. Obviously, lesions of the valves play no part directly in the form of the electrocardiogram, because the excitation wave does not pass through them, but they may play a part indirectly insofar as they affect the muscle mass and so the form of the ventricular complexes. Obviously, also, the spread of the excitation wave—hence the electrocardiogram, will not give any information of

value in determining the functional capacity of the heart muscle—its ability to do its work properly. Not valvular anatomy, not heart muscle function, but heart muscle anatomy, and that only, is what the electrocardiogram reveals. Any other information obtained concerning other lesions as, for example, the condition of the coronary arteries, is obtained only because of the secondary effects of such lesions upon the heart muscle.

So, with this basis of understanding to start with, we can pass to a consideration of the practical role the electrocardiograph plays in heart disease.

(1) **IRREGULARITIES.** It has already been stated above, that the great majority of irregularities of the heart's action should be recognized at the bedside with comparative ease, by anyone familiar with their underlying mechanism. In such cases the instrumental recording of the irregularity is of value only in that it serves to corroborate the clinical impression—or occasionally to show it to be wrong; except that such things as the site of origin of premature or ectopic beats can be accurately localized—a matter of comparatively little importance so far as the handling of the case is concerned. Occasionally, however, one encounters irregularities which are very difficult to identify, as for example, where premature contractions occur so frequently and at the same time, so irregularly, that it is extremely difficult to determine whether one is dealing with a case of premature contractions or of auricular fibrillation. In such a situation, one has either to take an electrocardiogram to settle the matter at once, or else observe the pulse and heart frequently in the hope that if the irregular rhythm is due to premature contractions, it may be observed at a time when these are so few or else so regularly spaced as to make the diagnosis clear.

Obviously it is a matter of the most vital importance to know definitely which condition we are dealing with, for MacKenzie's classification of auricular fibrillation as the "Dangerous Type of Irregularity" and premature contractions or extra systoles as the "Harmless Type of Irregularity" is as true today as it was then.

Occasionally one can pick up electrocardiographically irregularities which were not even suspected, though in practically every case careful examination should give the correct clue to the diagnosis. Auricular flutter, for instance, may be picked up with a regular ventricular rate of 75, or of 100 or of 150, for example, and may surprise one

by its unexpectedness. A well marked sinus arrhythmia may be miscalled auricular fibrillation. A paroxysm of rapid heart action may be really auricular fibrillation instead of auricular or nodal tachycardia, though the difference in prognosis and in treatment between the two conditions is really not particularly important.

(2) **CONDUCTION DISTURBANCES.** In many respects overlapping irregularities of the heart's action are certain conduction disturbances. Where there is a delay in the passage of the impulse at any point in its normal circuit, there occurs what is called a "block." This block may occur at the very site of the impulse formation—in the sino-auricular node, in the auricular-ventricular node, or in the main bundle branches or their smaller branches.

Obviously a ventricular beat is completely dropped when the "block" is of sufficient degree to stop completely the passage of the impulse to the ventricles waiting ready for the stimulus to cause them to contract. Such dropped beats are most frequently confused with premature contractions, where the contraction is not forceful enough to send a beat to the wrist where it may be felt in its premature relationship to the succeeding beat, so that from a study of the pulse alone, one would be justified in diagnosing heart block, because a dropped beat actually does occur. However, in this case on listening to the heart one would hear the premature contraction whereas in true heart block at the corresponding instant there would be a deep silence. In spite of this, heart block and premature contractions are confused more frequently, I think, than any other irregularities; probably premature contractions are falsely labelled heart block more often than the reverse.

Now, there is one type of heart block in which the diagnosis is possible only by the use of graphic methods. Where the block is partial only, so that no impulses are completely stopped in their passage, but all of them are merely delayed, no dropped beats occur, but the heart beats regularly. In such a case, only the electrocardiograph or the polygraph can detect the disorder, and yet it is a very serious one.

When the heart block is complete so that no beats at all can traverse the bundle of His, the auricles and the ventricles beat independently, the latter at a very slow rate, though regularly. The very slow normal heart rate of simple bradycardia should easily be distinguished from this by its speeding upon exercise, but it is surprising how many times cases of simple bradycardia are

sent up for electrocardiograms with the diagnosis "complete heart block." And what a difference in the implications! The reassurance of a sound heart in the one case and the prospect of an early death in the other!

And, finally, defects in intraventricular conduction can be recognized only by the electrocardiograph. Frequently they are picked up quite unexpectedly in hearts which clinically gave no indication of any serious derangement. And yet, the prognosis as a rule, is grave.

(3) MYOCARDIAL DISEASE. To my mind the greatest value of the electrocardiogram lies in its detection of heart disease when all other indications are absent, and especially in the diagnosis or exclusion of coronary disease, when the clinical picture is not clear. When there is a valvular lesion, or enlargement of the heart, or auricular fibrillation, for instance, or congestive failure, or a clear story of angina pectoris—all of which are essentially clinical diagnoses—the electrocardiogram merely serves to throw further light on the exact nature of the heart condition, for in such cases we already know that heart disease is present. But consider the frequency with which we are called upon to decide whether a given set of symptoms are due to organic disease of the heart, or to other causes, or to a cardiac neurosis or to effort syndrome. Or consider the case of an applicant for life insurance where the sum involved may be great enough to cause the Insurance Company to require complete and accurate information about the state of the applicant's circulatory system. The history may be inconclusive or entirely negative for heart disease; physical examination may reveal no evidence of heart disease; the tests for syphilis may be negative, and the urine normal. But note such an instance where a man in the prime of life, entirely without symptoms and with a normal heart on examination, being required by an Insurance Company to have an electrocardiogram made, presented a typical bundle branch block.

There is another situation in which the electrocardiogram may be the conclusive factor in making the diagnosis. That is in atypical coronary occlusion. The typical case where the clinical picture is so clear as to leave little doubt, needs no electrocardiogram except to prove the diagnosis or to localize the site of the infarction—a matter of considerable prognostic importance at that. But consider the case of a 54 year old man who began having attacks of pain, not substernal, but in the left infraclavicular area. These attacks were from mild to moderate in se-

verity, variable in their occurrence, coming on as much at rest as on exertion, lasting from a few minutes to half hour, and not radiating. For years he had had a blood pressure from 190 to 220 systolic and 100 to 130 diastolic. Physical examination showed no evidence of heart disease. An electrocardiogram showed some changes over one taken 2 years previously, but nothing absolutely diagnostic. It seemed very doubtful that his pain was of coronary origin. Nevertheless, he was put to bed and 16 days later another electrocardiogram was made. The diagnosis now became absolutely clear for the changes in the T waves in lead IV could not be mistaken. He had had a coronary occlusion. Further corroborative evidence was soon forthcoming, for his blood pressure began to fall and he had a very rapid sedimentation rate. He recovered, the form of the electrocardiogram stabilized itself, and he himself derives great comfort from the fact that today his electrocardiogram shows no change over the one a year ago.

A 60 year old man became very weak and tired but had no pain and was able to climb a ladder several times daily without discomfort. His doctor noted that the heart was sometimes regular and sometimes irregular. When I saw him, several days later, he had a very low blood pressure (100-60), his heart was fibrillating, and he had a pericardial friction rub. A diagnosis of painless coronary occlusion was made and an electrocardiogram was obtained more as a permanent record than for any other reason. Two days later the friction rub had disappeared and his heart had become regular. Once again an electrocardiogram was obtained merely for the record. This time, rather surprisingly, it showed such a marked change in Lead IV from the previous one, that Dr. McNeill remarked "I see you cured his fibrillation but gave him a coronary occlusion." The diagnosis was thereby confirmed, and the electrocardiogram ordered merely "for the record" turned out to be an important bit of evidence.

Finally, at times the electrocardiogram plays a very important part in a negative way. Here is the case of a 42 year old man who had substernal pain on walking after breakfast and under no other conditions. Although it was strange that the pain occurred only after breakfast, yet the fact that it was brought on only on walking naturally, centered attention on the heart. Although there was no clinical evidence of heart disease, yet electrocardiograms were made and repeated, to pick up any changes that might have occurred. All records were uniformly normal. Gastro-intestinal examinations

showed a high degree of pylorospasm and of cardiospasm. In spite of antispasmodics and other treatment, to this day he still has the same symptoms at intervals. They are unquestionably of esophageal or gastric origin, but the presence of a normal electrocardiogram which remained constantly normal on repeated examinations, was tremendously helpful in ruling out the heart as the source of the trouble.

SUMMARY AND CONCLUSIONS. And, so, we see that the electrocardiogram practically has its greatest value (a) in identifying obscure rhythms; (b) in detecting myocardial and coronary disease; (c) in the diagnosis of coronary occlusion and in following the progress of the lesion; and (d) in helping to eliminate the heart as the source of symptoms. It is of value for other purposes, but in many instances the information it gives merely amplifies what is already known and is, in a sense, superfluous. And, finally, it will not diagnose (directly) valvular disease nor tell us anything about the functional efficiency of the heart.

DISCUSSION

Marion F. Beard: The electrocardiogram is necessary for a complete cardiac work up. At the same time, it can be quite misleading. It is no more a single diagnostic machine than is the blood count, or any other single test. Electrocardiography is one of our factors in making a clinical diagnosis, and only one. I think Dr. Kinsman has shown very well that it may be the very thing that gives us a lead to cardiac diagnosis or it may be misleading if taken too literally. To illustrate that point, I saw a case last month that had all the clinical features of coronary occlusion yet there was a normal cardiorgram. Two days later there were changes such as those Dr. Kinsman showed. That electrocardiogram could have been quite misleading if taken as the final diagnostic criteria.

The electrocardiogram has no value directly from the standpoint of function. I cannot emphasize that point too much. I think if we have an understanding of the electrocardiograph, what it is supposed to do, and can do, we can use it much more intelligently, with much more satisfaction, to us and to the patient.

Emmet F. Horine: The question concerning bundle-branch block is extremely interesting. In the light of our present knowledge we have had to revise our ideas concerning the prognosis of bundle-branch block. Formerly I thought that any person having an electrocardiogram showing this lesion persistently would not live longer than four and often less than two years. This idea still holds good when congestive failure continues despite adequate treatment. However, without congestive failure, and even though there may be marked cardiac en-

largement and related findings with bundle-branch block, the person may be moderately active for many years. I know a man who over twelve years ago was found to have bundle-branch block at the Massachusetts General Hospital. He has been under my care recently and continues to show the electrocardiographic abnormality. Also, I have a female patient with marked changes who has been under observation for over seven years. I saw the man of 33 about whom Dr. Humphrey asks and found no cardiac abnormality other than a bundle-branch block. He is able to take any type exercise desired, without provoking either fatigue or dyspnoea. It is possible that this young man has an isolated congenital anomaly causing the bundle-branch block, and since the heart is otherwise normal, he may live out his expectancy.

We can agree, certainly, with the practical conclusions of the essayist. Formerly we relied on electrocardiograms for the differentiation of the cardiac irregularities, but now we can diagnose most of them without instrumental aid. We must continue to rely on electrocardiograms for the diagnosis of partial heart block, bundle-branch block, and a few of the rarer irregularities. Electrocardiograms are sometimes helpful in differentiating certain valvular defects.

I wish especially to emphasize the fact that electrocardiograms are chiefly of use in determining whether coronary changes are present. In adults especially a heart examination is incomplete unless electrocardiograms are made. I also want to suggest that comparative electrocardiograms are of great value. Each of us should have them made and filed for the purpose of making comparisons. I have had many cases in which slight, though definite changes in later electrocardiograms, have positively indicated the development of coronary disease. Further, a normal type electrocardiogram may be present, occasionally, even with gross myocardial changes.

Edward C. Humphrey: I would like to ask Dr. Garon or Dr. Horine about a case of bundle-branch block. He is perfectly normal in every way, except that he has a bundle-branch block on the electrocardiogram. I wonder how to interpret it. There was an article in "Internal Medicine" saying it could occur in healthy individuals, but it did not throw much light on it. People who have had it may live a useful, normal life. What is your feeling about bundle-branch block in a man of 33, in the absence of anything else to indicate heart disease?

Morris M. Weiss: There is one point I would like to emphasize, i. e., the value of the electrocardiogram in evaluating the functional capacity of the coronary arteries. When diseased coronary vessels are put under strain, transitory

electrocardiographic changes may be produced. The functional capacity of the coronaries may be tested by increasing the work of the heart through exercise or by breathing oxygen of low concentration which produce anoxemia of the myocardium. The electrocardiographic changes may last from seconds to minutes. The experiment is harmless since it is never necessary to test an individual with serious established heart disease. The test has its value in differentiating it with the clinical picture, in a case of this in origin.

J. Murray Kinsman, (in closing): If I may be allowed, I should like to say a word to elaborate on Dr. Horine's comments. Our conception in interpreting laboratory findings has always been based on our experience in correlating it with the clinical picture. In a case of this sort, bundle-branch block is demonstrated cardiographically and the patient has advanced myocardial disease; it was therefore assumed that bundle-branch block and advanced myocardial disease go hand in hand; hence the bad prognosis. Recently there have been creeping into the literature instances of so-called transitional bundle-branch block and fractional bundle-branch block. Under certain conditions bundle-branch block can be produced or eliminated, at will, by certain drugs. The patient referred to here had a bundle-branch block first demonstrated several years ago. Shortly after that, at the request of the Insurance Company, he was seen by a prominent cardiologist who found a normal cardiogram. At that time he was given standard insurance. The bundle-branch block has been persistent in a number of cardiograms taken since.

In closing, I am aware of the fact that in reading Dr. Kinsman's paper I may have been guilty of omitting certain important things. To condense the paper to suit the time limits of the Society, may have resulted in my sacrificing some of the essential things the essayist wished to include in the paper.

Rewards of a Medical Career: I believe that in the future, as in the past, medicine offers a young man a career which will challenge the very best that is in him. Although his income will probably never be large, it will be adequate. The same intangible things which appeal to us today will still reward him. He will have a respected place in society and will have the realization that he is contributing a worthwhile service to society. He will be given the opportunity to deal with and know people in a personal way which should give him lasting enjoyment. His work will be interesting as long as he lives. I shall be happy and proud to have my sons enter the medical profession.—From *The Bulletin of the Hennepin County Medical Society*, Minneapolis.

BOOK REVIEWS

CANCER WITH SPECIAL REFERENCE TO CANCER OF THE BREAST—By R. J. Behan, M. D., Dr. Med. (Berlin) F.A.C.S., Co-founder and Formerly Director of the Cancer Department of the Pittsburgh Skin and Cancer Foundation. 168 illustrations. The C. V. Mosby Company, St. Louis, Publishers. Price \$10.00.

This book is written primarily for the clinician who is seeking to enlarge his knowledge of the cancer problem.

All the material compiled in this volume should be invaluable to the members of the medical staff of any cancer clinic.

The etiology, diagnosis and the treatment of cancer are given in minute detail. Special reference is made to cancer of the breast in all its phases.

WORK BOOK IN ELEMENTARY DIAGNOSIS FOR TEACHING CLINICAL HISTORY RECORDING AND PHYSICAL DIAGNOSES—By Logan Clendenen, Professor of Clinical Medicine, University of Kansas. Illustrated. C. V. Mosby Company, Publishers, St. Louis. Price \$1.50.

This volume is an enlarged note book that has been found so successfully used in the fundamental sciences, brief forms for history taking and for routine physical examination are given in detail.

The explanatory comments on the outline for physical diagnosis are designed for the best methods of technical procedure and to direct by suggestion the student's examination.

Of special interest is the outline for the examination of infants and children and such procedure as suggested in these chapters are excellent for a general practitioner as well as the student.

As physical diagnosis is an important part of medical practice this volume is a welcome addition to any medical library.

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William Wood and Company, Publishers, Baltimore, price \$7.00 or \$7.50 with Thumb Index.

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EDITORIALS

THE WAGNER HEALTH BILL

The House of Delegates of the American Medical Association unanimously adopted the following report on the Wagner Bill:

Your reference Committee has carefully considered the Bill designated as S.-1620, "A Bill to provide for the general welfare by enabling the several states to make more adequate provision for public health, prevention and control of disease, maternal and child health services, construction and maintenance of needed hospitals and health centers, care of the sick, disability insurance, and training of personnel; to amend the Social Security Act; and for other purposes."

This bill was introduced by Senator Robert A. Wagner of New York, February 28, 1939, and is commonly referred to as the Wagner Health Bill. The bill itself provides that, if it be enacted, it may be cited as the "NATIONAL HEALTH ACT OF 1939." The purposes of the bill are sufficiently stated in the title, but the bill itself must be recognized as a proposed amendment to the Social Security Act of 1935. The bill is intended to make effective a national health program recommended by the Interdepartmental Committee to coordinate health and welfare activities.

The House of Delegates of the American Medical Association at its special session in Chicago, September 16, 1938, considered the National Health Program and adopted resolutions based on five recommendations contained in the program. It is important that this fact be borne in mind, for the bill, which drafted long after these resolutions were adopted and at a time when the resolutions were presumably known to the proponents of this measure, does not recognize either the spirit or the text of these resolutions. Any criticism of this bill by the Association is not to be construed, therefore, as a repudiation of any of the principles adopted by the 1938 Special Session of the House of Delegates.

ANALYSIS OF THE BILL

S. 1620 proposes to amend Title V. of the Social Security Act—Grants to States for Maternal and Child Welfare—and Title VI—Public Health Work and Investigations—and proposes to add to the Social Security Act certain new titles; namely, Title XII—Grants to States for Hospital and Health Centers; Title XIII—Grants to States for Medical Care, and Title XIV—Grants to States for Temporary Disability Compensation.

Already some individuals and organized groups in the United States have ap-

peared before the Senate Subcommittee which has this bill under consideration and have urged its immediate enactment. Although the stated objectives of the Wagner Health Bill are generally recognized as desirable, your committee cannot approve the methods by which these objectives are to be attained.

Repeatedly, physicians and all other qualified professional groups have recommended the coordination and consolidation of the health activities of the Federal Government. The Wagner Health Bill leaves existing and proposed preventive and curative medical services widely scattered through several federal agencies.

This bill does not in any way safeguard the continued existence of the private practitioners who have always brought to the people the benefits of scientific research and treatment.

It does not provide for the use of the thousands of vacant beds now available in hundreds of church and community general hospitals.

The Wagner Health Bill proposes an extensive program in the field of "health, diagnostic, and treatment centers, institutions and related facilities," without defining their functions.

This bill proposes to make federal aid for medical care the rule rather than the exception, since it does not specifically limit its benefits to persons unable to pay for adequate medical care.

The Wagner Health Bill does not recognize the need for suitable food, sanitary housing and the improvement of other environmental conditions necessary to the continuous prevention of disease and promotion of health.

This bill insidiously promotes the development of a complete system of tax supported governmental medical care, thus undetermining and debasing present standards of medical services.

The House of Delegates in September 1938 urged compensation for the loss of wages during sickness. The Wagner Health Bill deviates from this suggestion by proposing to provide medical services in addition to compensation.

The Wagner Health Bill would authorize an enormous expansion of governmental medical services and therewith ultimately unlimited appropriations for its health program. The funds necessary would be so great as to increase still further the present burdensome general taxation.

The Wagner Health Bill provides for

supreme federal control. Rules and regulations must be promulgated by the Chief of the Children's Bureau in the Department of Labor, the Surgeon General of the Public Health, the Federal Emergency Administrator of Public Works, and the Social Security Board. These federal agents are given authority to disapprove plans proposed by the individual states.

The House of Delegates at its September 1938 Session approved the expansion of preventive and other medical services when the need could be shown. The Wagner Health Bill prescribes no method for determining the nature and extent of the needs for which it proposes allotments of funds.

The provisions in the Wagner Health Bill that have never been considered by the House of Delegates are: the authorization of appropriations for studies, investigations and demonstrations, and the creation of federal and state advisory councils.

The Wagner Health Bill, as judged by the considerations that have been here presented, is inconsistent with the fundamental principles of medical care established by years of scientific professional medical experience, and in the opinion of your committee it is, therefore, contrary to the best interests of the American people.

For years the health of the people of the United States, as measured by sickness and death rates, has been better than that of most foreign countries, and this improvement has been continuous. The fortunate health conditions in the United States cannot be disassociated from the standards and methods of medical practice that have prevailed under the present system of medical practice.

No other profession and no other organization has done more for the prevention of disease, the promotion of health and the care of the sick than have the medical profession and the American Medical Association. No other groups have shown more genuine sympathetic interest in human welfare.

The contribution of the individual members of the American Medical Association to medical care is universally regarded as monumental in total volume. The contribution of the American Medical Association, through a program of medical education and the activities of its numerous councils which safeguard medical service, give abundant proof of interest in the problems of the national health. It has given continued consideration to these problems, whereas others show concern with these proposals because of a present but, it is to be hoped, a temporary need

for relief. These are the groups which request revolutionary legislative action as indispensable for the extension and further diffusion of health facilities.

In view of its record and in consideration of the responsibility which American social history and the nature of medical care have imposed on the medical profession, the American Medical Association would fail in its public trust if it neglected to express itself unmistakably and emphatically regarding any threat to the nation's health and well-being.

The American Medical Association must therefore, speaking with professional competence, oppose the Wagner Health Bill.

Nevertheless, recognizing the soundness of the principles stated in the resolutions adopted by the House of Delegates at its special Session in 1938, namely, the expansion of preventive medicine and public health where need can be shown, the extension of medical care for the indigent and the medically indigent where the need can be demonstrated, with local determination of needs and local control of measures to supply these needs, your committee would urge the development of a mechanism for meeting these needs within the philosophy of the American form of government and without damage to the quality of medical services.

This question, as it relates to the aid to be given by an individual state to its own counties, municipalities or other local political units, is not immediately before this Association. The answer is to be found in the individual state constitutions and state statutes. Counties, townships and municipalities are creatures of the individual states and can be molded and guided by the state for its own purpose. The individual state, itself, is not a creature of the Federal Government. The Federal Government is, as a matter of fact, a creature of the individual states. The fundamental question is how and when a state should be given financial aid by the Federal Government out of the resources of the states as a whole, pooled in the Federal Treasury. Disasters, such as floods, dust storms, fire and epidemics, have long been recognized as justifying such Federal aid. No state or person has ever been heard to object to the use of funds out of the Federal Treasury for such purposes. No one has ever proposed, however, that because Federal aid is extended under such conditions to a state in distress, a corresponding aid must be extended to every other state, regardless of its need. Nor has anyone ever been heard to say that Federal aid to a state in distress, because of flood, dust storm, fire

or epidemic, shall not be extended, unless and until the suffering state has produced from its own treasury a stated amount of money to aid in affording the relief. The development of such bizarre thinking may be traced to those who have originated within comparatively recent years the granting of Federal subsidies—sometimes referred to as "grants in aid"—to induce states to carry on intrastate activities suggested frequently in the first instance by officers and employees of the Federal Government. The use of Federal subsidies to accomplish such federally determined activities has invariably involved Federal control. Any state in actual need of financial aid from the Federal Government for the prevention of disease, the promotion of health and the care of the sick should be able to obtain aid in a medical emergency without stimulating every other state to seek and to accept similar aid and thus to have imposed on it the burden of Federal control.

The mechanism by which this end is to be accomplished, whether through a Federal Agency to which any state in need of Federal financial assistance can apply, or through a new agency created for this purpose or through responsible officers of existing Federal Agencies, must be developed by the Executive and the Congress who are charged with these duties. Such method would afford to every state an agency to which it might apply for Federal assistance to enable it to care for its own people without involving every other state in the Union or the entire government in the transaction, and without disturbing permanently the American concept of democratic government.

SUMMARY

1. The Wagner Health Bill does not recognize either the spirit or the text of the resolutions adopted by the House of Delegates of the American Medical Association in September 1938.

2. The House of Delegates cannot approve the methods by which the objectives of the National Health Program are to be obtained.

3. The Wagner Health Bill does not safeguard in any way the continued existence of the private practitioners who have always brought to the people the benefits of scientific research and treatment.

4. The Wagner Health Bill does not provide for the use of the thousands of vacant beds now available in hundreds of church and community general hospitals.

5. This Bill proposes to make federal aid for medical care the rule rather than the exception.

6. The Wagner Health Bill does not recognize the need for suitable food, sanitary housing and the improvement of other environmental conditions necessary to the continuous prevention of disease.

7. The Wagner Health Bill insidiously promotes the development of a complete system of tax supported governmental medical care.

8. While the Wagner Health Bill provides compensation for loss of wages during illness, it also proposes to provide complete medical service in addition to such compensation.

9. The Wagner Health Bill provides for supreme federal control; federal agents are given authority to disapprove plans proposed by the individual states.

10. The Wagner Health Bill prescribes no method for determining the nature and extent of the needs for preventive and other medical services for which it proposes allotments of funds.

11. The Wagner Health Bill is inconsistent with the fundamental principles of medical care established by scientific medical experience and is therefore contrary to the best interests of the American people.

12. The fortunate health conditions which prevail in the United States cannot be disassociated from the prevailing standards and methods of medical practice.

13. No other profession and no other group have done more for the improvement of public health, the prevention of disease and the care of the sick than have the medical profession and the American Medical Association.

14. The American Medical Association would fail in its public trust if it neglected to express itself unmistakably and emphatically regarding any threat to the national health and well being. It must, therefore, speaking with professional competence, oppose the Wagner Health Bill.

15. The House of Delegates would urge the development of a mechanism for meeting the needs for expansion of preventive medical services, extension of medical care for the indigent and the medically indigent, with local determination of needs and local control of administration, within the philosophy of the American form of government and without damage to the quality of medical service.

16. The fundamental question is how and when a state should be given financial aid by the Federal government out of the resources of the states as a whole, pooled in the Federal Treasury.

17. The bizarre thinking which evolved the system of Federal subsidies—sometimes called “grants-in-aid”—is used to induce states to carry on activities suggested frequently in the first instance by officers and employees of the Federal government.

18. The use of Federal subsidies to accomplish such Federally determined activities has invariably involved Federal control.

19. Any state in actual need for the prevention of disease, the promotion of health and the care of the sick should be able to obtain such aid in a medical emergency without stimulating every other state to seek and to accept similar aid, and thus to have imposed on it the burden of Federal control.

20. The mechanism by which this end is to be accomplished, whether through a Federal agency to which any state in need of Federal financial assistance can apply, or through a new agency created for this purpose or through responsible officers of existing Federal agencies, must be developed by the Executive and the Congress, who are charged with these duties.

21. Such a method would afford to every state an agency to which it might apply for Federal assistance without involving every other state in the Union or the entire government in the transaction.

22. Such a method would not disturb permanently the American concept of democratic government.

KENTUCKY HONORED

At the recent meeting of the American Medical Association at St. Louis, Dr. E. L. Henderson of Louisville was elected a member of the Board of Trustees, which body administers the policies of the Association. Kentucky has not been represented on this Board since Dr. L. S. McMurtry served in 1897.



Dr. E. L. Henderson

Dr. Henderson is ex-President of the Jefferson County Medical Society, ex-Councilor of the Fifth District, and is Chairman of the Committee on the Study and Provision

of Medical Care of the Kentucky State Medical Association.

He is also a member of the American College of Surgeons and was instructor in the Medical School of the University of Louisville from 1909 to 1917 and was on the staff of the City Hospital until he resigned in 1921, and was a member of the staff of the Norton Infirmary from 1920 to 1925, and has been a member of the staff of the Kentucky Baptist Hospital since 1924. He is a member of the Founders group of the American Board of Surgery and is President of the Alumni Association of the University of Louisville.

Dr. Henderson is an honored member of the medical profession of Kentucky and it will look forward with confidence to the fine service he will render to American medicine during his five-year term as a member of the Board of Trustees of the American Medical Association.

THE BOWLING GREEN PROGRAM

The program committee has announced that Dr. Roger I. Lee of Boston and Dr. Louis Hamman of Baltimore have both accepted the invitation of the Kentucky Medical Association to appear on the program at Bowling Green, September 11-14. Both these men have attained positions of national importance in the field of medical education, organized medicine, and the private practice of medicine.

Dr. Hamman is Associate Professor of Clinical Medicine at Johns Hopkins University and Visiting physician at the Johns Hopkins Hospital. He is widely known as a consultant in Internal Medicine. He has been a frequent contributor to medical journals, and his appearances on the programs of medical associations have always been most welcome.

Dr. Lee was the Henry K. Oliver, Professor of Hygiene in Harvard University from 1914 to 1924 and since that time has been engaged in the private practice of medicine in Boston. During the war he was Lt. Colonel in the Medical Corps and consultant in Internal Medicine to the 3rd Corp of the American Expeditionary Force. Since 1931 he has been a Fellow of Harvard University. At the present time he is a trustee of the American Medical Association. In addition to his interest in the scientific phases of medicine he has always been interested in the economic problems of medical care. He has written extensively on both subjects and has been a frequent speaker at medical meetings.

The subjects to be discussed by Dr. Ham-

man and Dr. Lee will be announced later. The committee plans also to have a surgeon of national reputation as a guest speaker. The indications are that the program this year will be of great interest and very high quality.

THE HOBBY EXHIBIT

Recently much emphasis has been placed on the importance of relaxation from the strain of modern living. All of us recognize that a hobby does perhaps more than anything else to relieve the stress under which a physician must work. It is highly appropriate that the annual state meeting should encourage the development of outside interests by the members of the Kentucky State Medical Association. It is also fitting that the accomplishments of physicians outside the practice of medicine should be given recognition. The hobby exhibit at the Louisville meeting was one of the outstanding features of the exhibit section. The crowd of visitors found around the booth at all times was ample evidence of the interest of the physicians in the accomplishments of their friends and associates.

The success of such an exhibit obviously depends on the cooperation of the members who have something to exhibit. The committee in charge is composed of Dr. Jesshill Love, Chairman, and Dr. R. G. Spurling of Louisville and Dr. M. G. Buckles of Waverly Hills. Any one having material suitable for exhibit should communicate with the committee at once so that plans for the display may be worded out. It is obviously impossible to go out and invite exhibitors, since no one knows where interesting material may be found. It is hoped that false modesty will not prevent any one from submitting what he has done. The Hobby Exhibit at Bowling Green, September 11-14th should be bigger and better than any yet held.

BOWLING GREEN

One of Kentucky's outstanding educational centers will be host to the Kentucky State Medical Association on the occasion of its annual meeting in Bowling Green on September 11. Western Kentucky State Teachers College, where the meeting will be held, and the Bowling Green Business University are two institutions of higher learning that have brought fame to the Western Kentucky "Park City."

Bowling Green is located in Warren County, at the head of navigation on Barren River and within a few minutes' drive of the Mammoth Cave National Park. It is on the

main line of the Louisville and Nashville Railroad, 114 miles south of Louisville and 67 miles north of Nashville, and is on Highway 31-W, the chief artery of travel between the North and South. It is also on U. S. Highway 68 and State Highways 71 and 80. Bowling Green is located within easy driving distance of many of Kentucky's historical shrines and other points of interest to visitors.

Warren County has a highly efficient health department, an active medical society, and a woman's auxiliary to the society.

Including resident students, Bowling Green has a population of approximately 18,000 people. It has approximately fifty miles of tree-lined asphalt streets. The city maintains an excellent system of public schools and has twenty-five churches, representing practically all denominations, to which visitors are always welcome. A system of parks and playgrounds, including a municipal golf course, is adequately maintained. These and numerous other attractions including a beautiful country club, help to make Bowling Green one of the most desirable cities in which to hold the annual meeting.

COUNTY SOCIETY REPORTS

Letcher: The Letcher County Medical Society held its regular monthly meeting in the Directors' Room of the Bank of Whitesburg, at 8 p. m. April 25, 1939. The following members were present: Drs. A. L. Sparks, J. E. Stanfill, J. E. Crawford, T. R. Collier, R. D. Collins, T. M. Radcliffe, Carl Pigman, Owen Pigman, N. D. Priddy and J. E. Johnson.

The meeting was called to order by the president, A. L. Sparks. Minutes of the last meeting were read by the secretary, J. E. Johnson, and approved by the Society.

The subject of a Tri-County Medical meeting was discussed, and a committee, consisting of J. E. Johnson, chairman, R. D. Collins and J. E. Stanfill, was appointed to work out the arrangements for such meeting. The question of fiances was brought up, and a motion was made and seconded that all members be assessed \$3.00 (more if necessary) to take care of the expenses of such meeting. Dr. Sparks promised to make arrangements for the speaker. It was suggested by several members that an attempt be made to get Dr. Irvin Abell, of Louisville, or Dr. Rankin of Lexington, for speaker.

The speaker of the evening was Dr. Mose Howard, Urologist from Harlan, who spoke on the treatment of "Gonorrhea and Its Complications." Dr. Howard read an unusually interesting paper, in which he stated and stressed the fact that Gonorrhea was a self limited disease

and that most cases of Gonorrhea are over treated.

The discussion was in the form of questions by various members of the Society. Dr. Sparks asked a question as to whether or not the patient should be allowed to follow his usual occupation. Dr. Howard stated that most patients got along better if they did work, however, he stated that they should be warned to void frequently to keep down intracystic pressure, which he said was usually responsible for complications such as epididymitis, prostatitis, etc.; the paper was discussed further by various members of the Society.

Motion was made and seconded to adjourn.

J. E. JOHNSON, Secretary.

Pike: The Pike County Medical Society meeting at the regular time in April was host to the adjoining county societies of Johnson, Floyd and Letcher counties, Kentucky, and Mingo county, West Virginia. In addition, doctors from other nearby counties were in attendance, including Harlan and Knott counties. The meeting was a banquet meeting and was held at the Hatcher Hotel. E. M. Howard, president of the State Board of Health; A. T. McCormack, State Health Commissioner and Secretary of Kentucky State Medical Association, and P. E. Blackerby, Assistant State Health Commissioner, were also guests.

The principal speaker was A. T. McCormack, who gave a very informative and interesting address on the "National Health Program." Among the many things he said about the National Health Program and the socialization of medicine was that as long as the medical profession remained in unity and continued to give the type of medical service that it had in the past and met the problems of medical care square in the face that there be no need of fear for regimentation or socialization of medicine.

The meeting was well attended and everyone reported an enjoyable time.

H. K. BAILEY, Secretary.

Tri-County: The meeting of the Tri-County Medical Society, composed of physicians of Carroll, Gallatin and Trimble counties, was held in the local Health Department office at Carrollton, April 7, 1939. The meeting was called to order by J. S. Brown, president. John R. Pate, Louisville, of the State Health Department was the guest speaker and gave a valuable, interesting and instructive illustrated lecture on Venereal Diseases. The business meeting followed. Dr. Thomas J. Turpin, Chihuahua, Chihuahua, Mexico, was chosen as honorary member.

At the May 5, 1939 meeting the subject for discussion was Tuberculosis. R. E. Wehr, Case

Finding; Allen Donaldson, X-ray Finding; H. Carl Boylen, Diet and Medication; Phillip Nodler, Treatment by Surgery; J. S. Brown, After Sanatoria.

H. CARL BOYLEN, Secretary.

Rockcastle: The Rockcastle County Medical Society has held regular meetings at the Dixie Boone Hotel, Mt. Vernon. The meeting on March 3, 1939 was called to order at 7:30 p. m. following dinner. R. G. Webb, of Livingston, presented a talk on Vitamin Therapy in General Practice. Discussion followed by all present.

R. H. Lewis of Wilder, made the suggestion that some member present a paper on Differential Diagnosis of Coma. Following case reports, the meeting was adjourned at 9:30 p. m. On April 7, 1939, W. E. McWilliams, Brodhead, gave a very interesting paper on Dementia Praecox. Lee Chestnut, Mt. Vernon, is scheduled to have the program May 5.

We have had good attendance since our reorganization one year ago. During this period we have had a crippled children's clinic, and trachoma clinic in our county through the aid of the County Health Department under the direction of Walter Owens, M. D. We are planning a pediatric clinic in co-operation with some neighboring counties. We hope that every member will attempt to attend the next meeting during the spring and summer.

T. A. GRIFFITH, Vice-President.

Greenup: The Greenup County Medical Society met at the office of the Health Department, Greenup, May 12, at 7:30 p. m. Charles B. Johnson presented a very interesting discussion on the treatment of Pneumonia with Sulfapyridine. He also presented case reports on treatment with anti-serum. Drs. Meadors, H. T. Morris, Zimmerman, Compton, Skaggs and Johnson were present.

R. L. COMPTON, Secretary.

Greenup: The Greenup County Medical Society met at 7:30 p. m., April 14th, at the office of the Greenup County Health Department.

C. Smith of Ashland gave an interesting paper on "New Remedies and Old."

R. L. COMPTON, Secretary.

Whitley: On April 2nd, 1939, Dr. Samuel T. Jarvis, was stricken with a cerebral hemorrhage at his home in Woodbine. He died about 48 hours later on the 4th day of April. He graduated at the University of Louisville in 1922, and soon after located in Woodbine.

It is difficult for those who were his daily associates, as we have been for the past 17 years, to speak in moderation of Doctor Jarvis'

sterling character, and many attainments, his fidelity to his profession, his true and steadfast loyalty to his many friends and patients, and his untiring efforts to serve unselfishly, suffering humanity in this community.

In his death the profession of this County, surrounding counties and state has lost one of its most useful members. To those of us who remain, there is left a memory of his loyalty and helpfulness in times of need. Although he has passed from our midst, his works and kind deeds will long be remembered by his associates in the practice of medicine, as well as his many many friends. His example will always be one to be emulated by those who live after him.

He leaves a widow and one daughter, and a host of relatives and friends to whom the members of Whitley County Medical Society send their sincere sympathy.

Resolved: That a copy of this tribute of respect be sent to his family, a copy to the local newspaper and a copy to the Kentucky Medical Journal for publication.

C. A. MOSS,
L. L. TERRELL,
L. S. SILER,
Committee.

Scott: A testimonial dinner in honor of his fifty years in the practice of medicine, was given Dr. J. W. Baird, Sadieville; on May 4th, at Georgetown, by the physicians and dentists of Scott County.

John Scott, Lexington, president-elect of the Kentucky State Medical Association, and Charles Vance, Lexington, district counselor, attended the meeting and gave short talks.

H. V. Johnson, Georgetown, gave a brief biography of Dr. Baird. This was followed by a talk by D. Baird.

Dr. Baird had been in the practice fifty years last March, and all but a year and one-half of the time, has been spent in the town of Sadieville and vicinity. The citizens of Sadieville expressed their appreciation of Dr. Baird's long service in the form a telegram, read at the meeting.

CARL M. GAMBILL, Secretary.

Jefferson: The annual subscription dinner will be held at the Kentucky Hotel, Monday, June 5, at 6:30 p. m. There will be an address by Harry Beckman, M. D., Milwaukee, Wis., subject: Chemotherapy.

On June 19, The Treatment of Carbuncles, (illustrated with lantern slides) will be given by A. D. Willmoth.

Annular Skin Lesions Mistaken for Ring Worm Infections (lantern slides) by Winston U. Rutledge.

W. B. TROUTMAN, Secretary.

NEWS ITEMS

Dr. Edward A. Strecker, Chairman of the Department of Psychiatry of the University of Pennsylvania, whose Salman Memorial Lectures were heard at the New York Academy of Medicine last month, will give a resume of the series at the Toronto Academy of Medicine, Toronto, May 5th.

The author of numerous books on psychiatric and neurological subjects, Dr. Strecker was selected to give the Seventh Annual Lecture series honoring the memory of Dr. Thomas W. Salmon, a pioneer in the field of mental health.

Dr. Strecker will speak on psychiatric aspects of our present-day culture, under the title "Beyond Clinical Frontiers," and will discuss "crowd-mindedness" an analysis of the emotional factors in "movements" and "mobs." He will also outline some of the factors present today which are real threats to our culture, and what social hygiene can do to counteract them.

Members of the medical profession are invited to attend.

The Kentucky State Executive Committee of the American Society for the Control of Cancer has been enlarged by the addition of four members from out in the state. Those just appointed by Dr. W. E. Gardner to represent the state medical society are: Drs. L. C. Smith, Ashland; Francis Massie, Lexington; E. Dargen Smith, Owensboro, and John H. Blackburn, Bowling Green. The previous members of the Committee, Dr. A. T. McCormack, Dr. Wallace Frank and Dr. J. Duffy Hancock, were reappointed to the enlarged committee.

Dr. John H. Blackburn, Bowling Green, and Dr. J. Duffy Hancock, Louisville, of the State Executive Committee, gave talks on Cancer, in Bowling Green on April 6th at the Kiwanis luncheon and a public meeting afterward.

Campbell-Kenton Medical Society will hold no meetings until September and then will be the first Thursday of each month and only once a month.

The Fourth Annual Assembly of the International College of Surgeons was held at the Hotel Roosevelt, New York City, May 21 through May 25.

More than 1,200 representatives of thirty nations were present. Internationally famous surgeons lectured to the assembly on their own latest developments in surgical techniques. Exhibits demonstrating the most modern advances in surgical science featured the assembly. New instruments and apparatus were shown by leading manufacturers. Operative clinics were held at

principal metropolitan hospitals. Election of officers, admission of new members, and awarding of honors were performed with colorful pageantry. International Surgeons' Day at the New York World's Fair climaxed the convention.

Dr. Fred W. Rankin, Lexington, addressed the American College of Surgeons in Baltimore, March 16th.

Dr. Hugh Cabott, Boston, addressed the Frankfort Forum Club, March 14th on "Adequate Medical Care," and a week later on March 22nd, Dr. A. T. McCormack, Louisville, presented the other side of the question.

The Public Works Administration announced Saturday that only .078368 per cent of the population had been untouched in some way by the PWA program.

Only three counties had not had a PWA project. These were Ohio county, Indiana; Trimble county, Kentucky, and Kennedy county, Texas.

Written examinations for certification by the American Board of Internal Medicine will be held in various sections of the United States on the third Monday in October and the third Monday in February. Formal application must be received by the Secretary before August 20, 1939 for the October 16, 1939 examination, and on or before January 1, for the February 19, 1940 examination.

Application forms may be obtained from Dr. William S. Middleton, Secretary-Treasurer, 1301 University Avenue, Madison, Wisconsin.

Dr. Frederick Gordon LaRue, 72, former Superintendent of The Eastern State Hospital for the Insane, died May 26th at the hospital after an illness of eight years. He was superintendent of the institution from 1921 to 1931 when he was stricken with paralysis. Dr. LaRue before going to Lexington served as Superintendent of the Western State Hospital at Hopkinsville, from 1919 to 1920.

A steady drop in typhoid cases throughout the State has resulted from the community sanitation program conducted jointly by WPA and the State Department of Health, according to a report by R. R. Harris, assistant director, United States Public Health Service.

A total of \$1,057,744 has been spent by both sponsors since 1933 on the elimination of filth-borne disease. From 1933 to this year, the report shows, 68,143 privies and 133 septic tanks have been installed. Property owners have paid \$785,745 for materials and local sponsors have contributed 42.5 per cent of the total cost.

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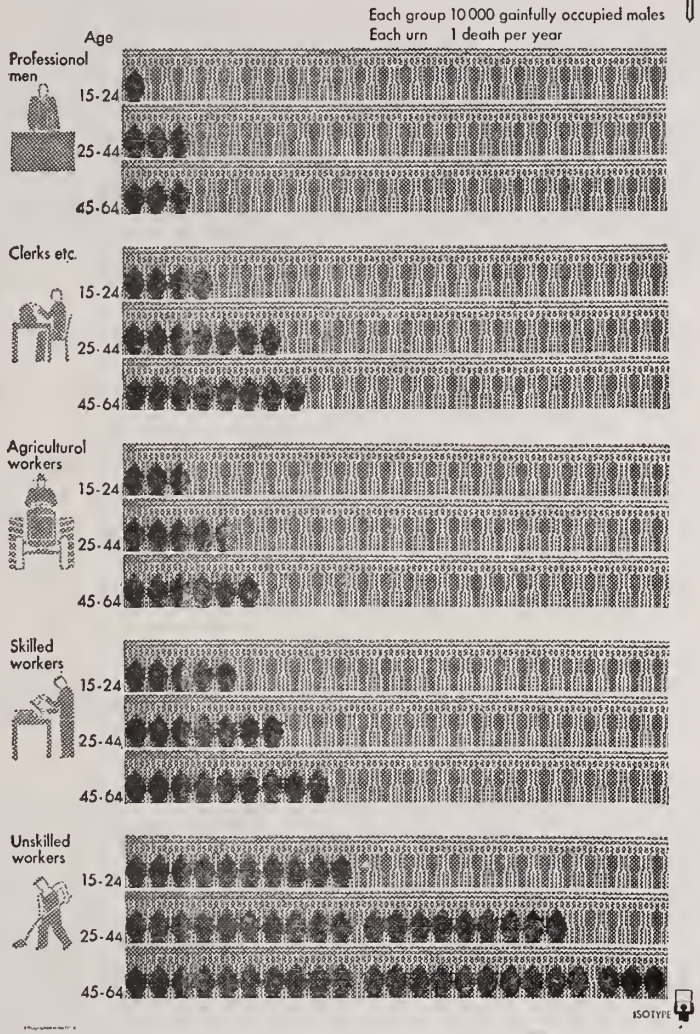
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JULY, 1939

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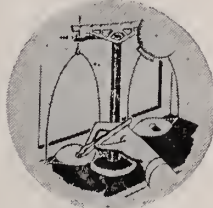


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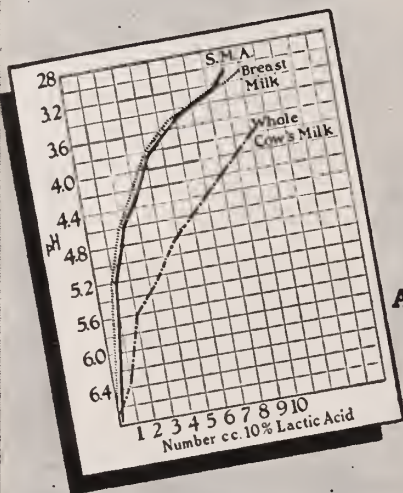
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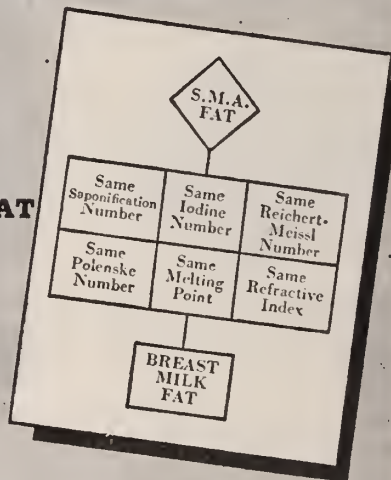
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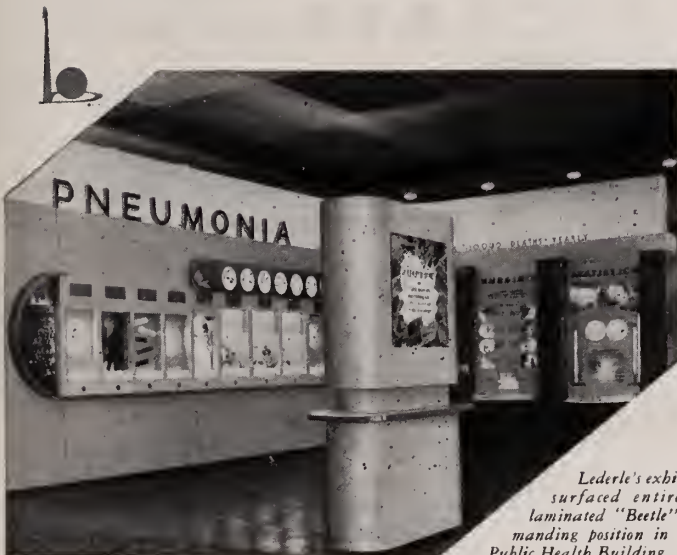
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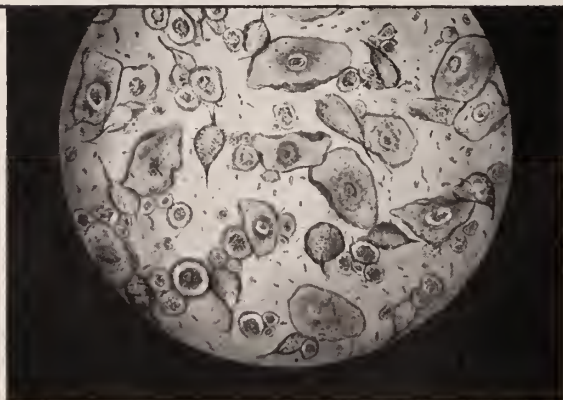
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Ballard	F. H. Russell	Wickliffe	
Barren	Rex Hays	Glasgow	July 19
Bath	H. S. Gilmore	Owingsville	July 10
Bell	E. S. Wilson	Pineville	July 14
Boone	R. E. Ryle	Walton	July 19
Bourbon	Eugene L. D. Blake	Paris	July 20
Boyd	Hubert J. Pritchard	Catlettsburg	July 4
Boyle	P. O. Sanders	Danville	July 18
Bracken-Pendleton	W. A. McKenney	Falmouth	July 27
Breathitt	Philip Bress	Jackson	July 18
Breckenridge	J. E. Kincheloe	Hardinsburg	
Bullitt	G. F. Brockman	Shepherdsville	
Butler	G. E. Embry	Morgantown	July 5
Caldwell	W. L. Cash	Princeton	July 4
Calloway	Hugh L. Houston	Murray	July 18
Campbell-Kenton	Joseph H. Humpert	Covington	
Carlisle	E. E. Smith	Bardwell	July 4
Carroll	J. M. Ryan	Carrollton	July 11
Carter	Don E. Wilder	Grayson	July 11
Casey	William J. Sweeney	Liberty	July 27
Christian	D. M. Clardy	Hopkinsville	July 18
Clark	R. E. Strode	Winchester	July 21
Clay	J. L. Anderson	Manchester	
Clinton	S. F. Stephenson	Albany	July 15
Crittenden	C. G. Moreland	Marion	July 10
Cumberland	W. F. Owsley	Burkesville	July 5
Daviess	James E. Hix	Owensboro	July 11 & 25
Elliott			
Estill	Virginia Wallace	Irvine	July 12
Fayette	D. E. Scott	Lexington	July 11
Fleming	Roy Orsburn	Flemingsburg	July 12
Floyd	J. G. Archer	Prestonsburg	July 26
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Fulton	J. C. Morrison	Fulton	July 12
Gallatin	J. M. Stallard	Sparta	July 20
Garrard	J. E. Edwards	Lancaster	July 20
Grant	Paul E. Harper	Dry Ridge	July 19
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Harrison	W. B. Moore	Cynthiana	July 3
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Hickman	Layson B. Swann	Clinton	July 6
Hopkins	David L. Salmon	Madisonville	July 6
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ORIGINAL ARTICLES

CHRONIC PULMONARY MONILIASIS*

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INTRODUCTION

Any practicing physician, whether he is doing general practice or specializing in diseases of the chest will see a large number of non-tuberculous chest diseases. In non-tuberculous chest diseases we may find many types of organisms in the sputum. It has been our experience in examining a large number of specimens of sputum to find conidia and mycelia in a large number of both the tuberculous and non-tuberculous patients. In one case conidia and mycelia have consistently been found in the sputum. A case of pulmonary infection with monilia albicans is reported herewith.

This infection and other fungus infections occur more frequently than suspected and this justifies a report of this case. Morris Flexner (1) reported a case in the Kentucky Medical Journal about three years ago. He believed the disease is much commoner than generally suspected and that it is often confused with pulmonary tuberculosis. Lawrason Brown once stated "The most important thing in the diagnosis of pulmonary tuberculosis is having the disease in mind." This would apply as well to the fungus infections. Bakst (2) stated "The diagnosis of moniliasis should be borne in mind in any case of pulmonary disease in which the etiology is questionable."

Jones in the British Medical Journal quoted Marrett as having examined all the sputa for monilia submitted to him for a period of five years ending 1931. Nearly two thousand examinations were made and 75 per cent showed monilia. He treated these with a monilia vaccine and an alkaline potassium iodide with the result that many were cured and the majority improved. The author, Jones, bronchoscoped twenty-five patients with various chest conditions and found from

smears taken from the bronchi monilia in only one. In the next twenty-five patients he examined specimens of sputum and found eleven positive for monilia. He concluded that monilia infection of the lungs does occur but its presence in the sputum does not mean its presence in the bronchi.

The diagnosis of pulmonary moniliasis first rests upon having the condition in mind. Since it may simulate other chest conditions, finding the organism in the sputum is the most valuable criterion for a diagnosis. According to the literature the typical case is that of an individual whose clinical symptoms may be mild in comparison to the X-ray findings. The usual location of the X-ray lesion is in the bases. The sputum is oftener mucoid or serous unless the patient is having an acute attack when it may be purulent. The physical findings may be scant also. Dyspnea on exertion and extreme weakness may be out of proportion to otherwise mild symptoms. It must be stressed that the final diagnosis depends upon finding and identifying the organism in the sputum and even then we may have a contamination from the mouth, secondary invasion of the lungs or bronchi or a primary fungus infection.

CASE REPORT

This patient, a male, forty four years old, was referred by Dr. Follis, October 17, 1936. He came in with the chief complaint of shortness of breath of four years duration and soreness in the neck of three years duration. He stated he was perfectly well five years ago and four years ago noticed shortness of breath on exertion. Three years ago a swelling appeared at the base of the neck on the right side. November 16, 1935 he had hemoptysis of one ounce and the same amount November 18, 1935. March 1936 he had hemoptysis of one half ounce, July 3, 1936, one ounce, August 29, one and one half ounces, August 30, one half ounce, and November 13, one half ounce. All these were usually followed by blood streaks in the sputum. The patient denied a cough except when he has a bad cold. He described his sputum as mucoid and stated this is raised by clearing the

*Read before the Barren County Medical Society.

throat. He has tired easily for four years. Appetite is bad at times. When the patient has a bad cold he notes a swelling in an enlarged gland at the base of his neck on the right side. Coincident with this for the past three or four years he has a soreness in the clavicle and upper anterior ribs which subsides as the swelling subsides. He states he has no fever and no night sweats. The patient states that years ago he had a severe attack of coughing which persisted with much heaving for eight days and then ceased and has remained so.

His industrial and occupational history reveals that he was born in Southern Kentucky and lived there all his life as a farmer with exceptions as will be mentioned. He lived at Bogard, Missouri, as a farmer, sixty miles northeast of Kansas City, from 1909-1912 and from March to November 1915. He had no illness while living in Missouri. Two months during 1914 he worked in Jeffersonville, Indiana, sandblasting passenger cars for the American Car and Foundry Co. He wore a hood at work. From November 1915 to January 27, 1919 he lived in Indianapolis and worked at a tin can factory with the exception of working as a stockroom keeper 1916-17 at the High Speed Chain Co. He had pertussis while working at this place.

His past history reveals that he had pneumonia at eight, measles at twenty-one, pertussis at twenty-eight, influenza at thirty-one, "blood poisoning" at thirty-three, teeth extracted at forty, and no operations. In regard to the "blood poisoning" he states this was first thought to be "flu". He became delirious with high fever and it was after this that a sore was noticed on the left hand with red streaks running up the arm and with the glands of the arm and axilla swollen. The patient stated that he had been hunting a few days before this illness but does not remember injuring the left hand. The axillary gland was lanced January 21st, after taking sick on December 5th. He had no pneumonia during this illness.

The family history is as follows: The mother is living and well. His father died of Bright's disease. He has four brothers and three sisters living and well. One sister died of questionable tuberculosis. He has one child living and well and one that died of "brain fever." His wife is in good health.

Physical examination upon admission: Patient is a male adult, tall and emaciated, weighing one hundred and twenty-nine pounds and slightly dyspneic while talking. The physical findings of significance were an edentulous mouth, a firm tumor-like mass

underlying the right sternocleido-mastoid muscle near the clavicular attachment, approximately the size of a guinea egg, palpable lymph glands at the elbow and in the axilla, and a scar on the left knuckle of the second finger. Laryngeal examination revealed arytenoids injected and the epiglottis and vocal chords normal. The blood pressure was systolic 100 and diastolic 70. Examination of chest showed: Left lung—note impaired to third rib and sixth vertebral spine, broncho-vesicular breathing to third rib and eighth vertebral spine, the vocal resonance slightly increased to second rib and sixth vertebral spine. There were no rales posteriorly but there were a few moist rales after cough at the end of inspiration in the first interspace. In the right lung the note was impaired to the third rib and fifth vertebral spine, the breathing broncho-vesicular to the second rib and sixth vertebral spine and the vocal resonance slightly increased to the second rib. There were occasional soft inspiratory rales after cough from the second to fourth rib and from the fourth to seventh vertebral spine. The rales heard in both lungs were not persistent and occasional wheezing sounds were heard during respiration.

X-ray examination of the chest revealed a moderately dense lesion in both upper halves of the lungs with peculiar nodular densities scattered throughout the involved area. There was quite a bit of inflammatory process in this area masking the normal markings. There is some suggestion of breaking down in both upper lobes. The Wassermann and Kahn reactions were negative and also the agglutination for Undulant Fever and Tularemia. The hemoglobin was 80 per cent, the red cell count 5,680,000 and the white cell count 8,700. The polys were 80 per cent, lymphocytes 14 per cent, monocytes 3 per cent and eosinophiles 3 per cent. The tuberculin test was negative. Numerous sputum examinations were negative for Tuberculosis but most of the specimens showed conidia and mycelia on direct smear. Dr. Allen cultured the sputum and found nothing on the first specimen but after culturing the second specimen he isolated a streptothrix which he intimated in his report could be a contamination. He prepared a streptothrix vaccine and the intradermal test made with this showed after only a few minutes an urticarial wheel about the size of a dollar. This was not followed by any other reaction.

Recently several sputum specimens have been examined at the State Board of Health Laboratories where *monilia albicans* was isolated and identified.

TREATMENT

On account of the marked pulmonary involvement the patient was put to bed as a tuberculous patient would be. He was treated with a streptothrix vaccine for two months, potassium iodide to the point of intolerance, vitamins and iron. He gradually increased in weight and well being. A series of X-rays showed a gradual but a rather marked change over a period of time. There was much clearing of the inflammatory process. He had a few hemorrhages and temporary setbacks during the course of treatment but these always followed some break in his rest. The patient again broke his rest this past fall and helped in the cutting of tobacco. Following this he had a small hemoptysis daily for one month. A recent X-ray of the chest shows further clearing and retraction of the disease toward the apex.

DISCUSSION

In a review of this case we see that the most prominent symptom is dyspnea on exertion, probably the next most prominent symptom is the frequent hemoptysis. Cough is absent except during a cold. The sputum is serous; the physical findings are sparse compared with the X-ray findings. The X-ray lesion is in both apices and the most usual location of monilia as reported in the literature is in the bases. The patient improved under supportive treatment and iodides. He has been ill six years and judging the future by the past he may have several years of comfortable living before him if he continues to follow his treatment.

The study of any chest disease probably brings into use more diagnostic procedures than any other ordinary illness. The least that should be done before a tentative diagnosis is made is a complete history, physical examination, X-ray of chest, tuberculin test and many sputum examinations. Although every one of these diagnostic procedures are important I want to emphasize the importance of the tuberculin test and the sputum examinations. It is these examinations that determine definitely whether you are dealing with a tuberculous infection or not. And it is important to know from a treatment standpoint whether you are dealing with a tuberculous infection or other type of pulmonary infection.

In conclusion, I have presented a case history of a chronic pulmonary mycotic infection due to monilia albicans. In the differential diagnosis several things have to be considered on account of the patient's history. Since he lived in Missouri where sporothricosis occurs this will have to be considered. He also worked in New Albany sandblasting

for awhile. A silicosis with secondary monilia will have to be considered. Then he gave a history of a blood stream infection which followed hunting. He had chills and fever, delirium, and it was noted after the onset of this illness he had a sore on his finger with red streaks and glandular involvement. Later an axillary gland was lanced. He could have had at this time an ordinary infection, or a fungus infection of finger with systemic spread, or a tularemia. And, too, all the other pulmonary fungus infections will have to be considered in addition to tuberculosis, but the most likely diagnosis seems to be monilia albicans.

BIBLIOGRAPHY

- (1) Flexner, Morris: Pulmonary Moniliasis, with report of a case, Kentucky Medical Journal, 34: 151-154, April, 1936.
- (2) Bakst, Henry J., Hazard, J. Beach, Foley, John A., Pulmonary Moniliasis, J. A. M. A., 102: 1208-1213, April 14, 1934.
- (3) Jones, Bertram H.: The Significance of Monilia in the Sputum, The British Med. Jour., Pages 368-370, March 3, 1934.

THE SURGICAL TREATMENT OF MASSIVE HEMORRHAGE FROM PEPTIC ULCER*

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and

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It is now generally accepted among surgeons and clinicians that there are four definite indications for surgery in peptic ulcer, viz., perforation, obstruction, intractability to medical treatment, and hemorrhage.

About the first two indications there is no controversy. Intractability, however, is a broad term and clean-cut individualization of cases is necessary to define the limits of this group. The treatment of bleeding peptic ulcer on the other hand, is a more controversial subject and only within the past decade has a considerable group of the profession become convinced that there is a certain percentage of these cases inevitably doomed by medical management, which may be offered some chance by the institution of proper surgical maneuvers at the proper time. It is the selection of this group and the determination of accurate factors which influence selection under conditions of severe exsanguinating hemorrhage which is a complex problem in gastric surgery today. Most peptic ulcers bleed at some time in their course and the hemorrhage may vary from slight unrecognized leakage, to a mas-

*Read before the Fayette County Medical Society.

sive, exsanguinating, alarming flow causing complete collapse.

Ninety-five per cent of all peptic ulcers show gross, microscopic, or chemical evidence of blood in the stool. Statistics vary, however, as to the incidence of severe hemorrhage in such cases because there are no standard criteria by which to judge the degree of bleeding. In a survey of the literature, such terms as "copious" bleeding, "severe", or "massive" hemorrhage are among those used to designate any degree of bleeding, from gross hematemesis to exsanguination. As it is characteristic of the laity to exaggerate the amount of blood loss and since emotional instability plays so important a part in regulating the threshold of shock, the two important factors in determining the gravity of the catastrophe cannot be accurately evaluated. Again, the great variation in the incidence and degree of bleeding found in patients of different social strata is emphasized in the data presented from large city hospitals in contrast to private practice. It is evident therefore that many variables have an important bearing on the wide diversification seen in the following statistics. For instance, Crohn found hemorrhage to be present in 29 per cent and 19 per cent of gastric and duodenal ulcers respectively. In Eggleston's 500 cases of peptic ulcer, "copious bleeding" is reported as being present in 19 per cent. Thirty per cent were found by Hurst to suffer the catastrophe out of a group of 1340 cases while, as he pointed out, the incidence of hemorrhage in gastrojejunal ulcer was 45 per cent. Goldman studied 890 cases of peptic ulcer admitted to the San Francisco Hospital, 38 per cent of whom suffered "grave hemorrhage"; almost exactly that of Sir Berkeley Moynihan's series. In over 5000 consecutive autopsies, Reschke found that death from hemorrhage in ulcer occurred in 46 per cent. Again, the statistics on mortality in severe hemorrhage from peptic ulcers are widely at variance. Lahey quotes a mortality of five per cent while Ross, of Melbourne, credits medical treatment with a toll of 58 per cent in a group of 43 cases. Figures ranging between these limits have been found by the following writers: Allen, 14.5 per cent; Goldman, 17 per cent; Gordon-Taylor, 21 per cent; and Atkins, 42.8 per cent.

The old adage, "bleeding ulcers rarely die," although it preserves an element of truth, has created an unwarranted confidence in the "Laissez-Faire" policy of medical treatment and has built up a strong prejudice against more aggressive measures. These figures however, would suggest a departure

from the older, more conservative measures used in the treatment of these cases, and steps have been taken in the face of considerable opposition to revolutionize the treatment of massive hemorrhage from gastric, and particularly duodenal, ulcer. In Germany the prevailing note has been one of conservatism after the teaching of Mikulicz, who even during his life had the foresight to express hope that the technical difficulties of his time might be overcome and that some day the surgical care of bleeding ulcers would become a recognized form of treatment. Karl Reschke, Mossberg, Myers, and others have taken up the cause with encouraging results. Finsterer, of Vienna, in 1914 first began to practice early surgical intervention in severe hemorrhage from peptic ulcer, and since then has shown that it should be undertaken within the first 48 hours. In a series of 46 cases operated upon within this time, the mortality was 4.3 per cent. In 55 cases operated after the 48 hour period, it rose to 32.7 per cent. He has done 52 resections for bleeding ulcer with two deaths.

Gordon-Taylor feels that acute hemorrhage from an ulcer is as much a surgical emergency as perforation and from 1919 to 1931 lost only two cases out of 22 operated upon. In a later group there were three deaths in 21 cases operated. Oliavi, of Triest, lost one of ten cases operated; Reschke has lost two out of twelve cases, while Allen is recently quoted by Young as having operated on 31 patients without a death.

In order to establish criteria upon which to base the indication for operative intervention, the many and varied factors which influence prognosis in the event of massive hemorrhage from peptic ulcer must be carefully evaluated and clearly understood. First, death following massive hemorrhage from ulcer rarely occurs in women; men beyond middle age comprise the vast majority of such fatalities; second, clinical activity of an ulcer may be thought of in terms of progressive tissue destruction while chronicity implies fixation with dense non-retractile scar formation. In combination, the result is erosion of an inelastic, thick-walled vessel which offers little aid to hemostasis. These two factors not only produce severe bleeding but predispose to recurrent hemorrhage. Arteriosclerosis may replace chronicity without altering the situation, and all three increase mortality; third, duodenal ulcer is more often than gastric ulcer, the cause of massive hemorrhage. It bleeds more freely and is a far more common cause of death. The explanation for this lies in the fact that patients with duodenal ulcer greatly out-

number those with gastric ulcer, and because more duodenal ulcers which bleed are situated on the posterior wall just over the pancreaticoduodenal artery, a relatively large, superficial vessel accessible to the injury of an active, penetrating process; fourth, age, with the background of chronicity, the presence of arteriosclerosis, the possibility of hypertension, a minimal reserve, and coexisting diseases, all tend to increase the mortality from hemorrhage. Allen found a mortality of 4.4 per cent in 9 cases under 50 years of age, while in 42 cases over 50 years of age the mortality was 33.1-3 per cent; fifth, the percentage of recurrent severe bleeding increases with each subsequent hemorrhage while mortality becomes infinitely higher. Gordon-Taylor has found it to range between 74 and 78 per cent following the second hemorrhage; sixth, in those patients who after an initial massive hemorrhage show evidence of early repeated episodes of bleeding, the prognosis is grave. When bleeding persists or recurs following one or two transfusions, the outcome is frequently fatal; seventh, it has been observed that of patients who survive the first severe hemorrhage, 40 per cent will not be relieved of ulcer symptoms by medical treatment and after the second and third episode, the figure is increased to 80 per cent; eighth, it was found by Atkins that 62 cases which bled over 24 hours all died; ninth, in 46 autopsies performed on patients dying of hemorrhage, Chiesman reports that erosion of a large vessel was responsible in 45; and finally, Finsterer goes so far as to say that 98 per cent of severe acute hemorrhage is caused by erosion of a large vessel.

Having established the thesis that without surgical intervention a definite percentage of patients suffering massive hemorrhage from peptic ulcer will succumb, the question of indications for operative intervention presents itself. The problem resolves itself into what appears to be four well defined groups of patients. Operation is indicated, first, when massive hemorrhage occurs from a known gastric or duodenal ulcer in a patient over 50 years of age; second, when massive hemorrhage occurs in a known peptic ulcer of long standing and continued activity which has failed to respond to a careful medical regime; third, when massive hemorrhage follows one or more previous episodes of severe bleeding; and fourth, when massive hemorrhage of ulcer origin fails to respond to one or two transfusions and there is evidence of continuous or early repeated bleeding.

Chief among the difficulties which arise

is the question of diagnosis. Profuse hematemesis may occur as a result of many different types of pathology for which surgical intervention is utterly futile. It is not within the scope of this paper to give an exhaustive discussion on differential diagnosis but a few lines may help to illustrate the intricacies of this complex and vital problem. Occasionally the stage may be set and the diagnosis obvious, but all too frequently there is at best only a vague and incoherent history of indigestion from a sick and frightened patient or panicky relatives, and physical findings may be of little help.

To review briefly some of the possible causes of hematemesis, the first and perhaps most difficult to differentiate is severe bleeding from gastritis or duodenitis, the incidence of which Rieves quotes as 12 per cent. It is usually preceded by a relatively short and severe course of indigestion, epigastric discomfort, and upper abdominal distention with burning pain, relieved somewhat by soda, and associated with heart burns and water brash eructations. There is often a history of dietary indiscretion, but frequently this is absent and too often the picture is typically that of peptic ulcer. Ruptured esophageal varices in cirrhosis of the liver is not an uncommon occurrence; blood loss is sudden and severe and a vague digestive history usually is present. In the absence of demonstrable fluid in the abdomen or a palpable liver, the diagnosis is difficult. The Dakota Ara reaction is reputed to be of value in cirrhosis and if positive, should mitigate against operation.

In the purpura or hemophilia, age, history, physical findings, and blood studies should definitely establish the diagnosis, while in splenic anemia a palpable spleen may be added to the list of diagnostic findings. Gastrorrhagia as associated with cholelithiasis is rare but usually the biliary pathology is sufficiently in evidence to obviate a mistake. A case to be discussed subsequently will serve to illustrate coincident gastric ulcer and biliary obstruction from common duct stone. Syphilis of the stomach is rarely a cause of severe hemorrhage. It is the manifestation of a tertiary lesion and therefore serology may be negative. However, a history and other late manifestations may help to solve the problem. In bleeding from malignant disease, also suggestive of advanced pathology, the history, clinical picture, and examination should help one to decide the matter. In malignancy, however, severe bleeding is usually the result of erosion of a large vessel and under these circumstances, one may be forced to consider the question of opera-

tion unless the patient is obviously an impossible risk.

Prompt hospitalization following massive hemorrhage is essential, and routine shock treatment with the exception of intravenous fluids is begun immediately. If blood pressure falls below 70, a drip transfusion seems more practical than repeated small transfusions. The initial dose of morphin should be generous but thereafter sedation is best effected by other means in anticipation of the susceptibility to pulmonary complications in these depleted patients. The question of emptying the stomach is open to discussion, one patient treated by continuous drainage for several days stopped bleeding after removal of the tube, while another patient not subjected to drainage was found at operation to have a complete cast of the stomach from coagulated blood. With repeated vomiting or evidence of gastric distention, washing the stomach may be the lesser evil. Water by mouth, in small quantities is comforting and harmless. The patient is carefully observed for continuous bleeding, routine laboratory studies are made and a large quantity of blood is readily available for transfusion.

Once operation has been decided upon, preparation should rarely require more than 24 hours and the 48 hour dead-line cannot be too strongly emphasized. Beyond this point the havoc wrought by severe anemia begins to show its effect and will take weeks to repair. The cellular element in the blood is enormously depleted; the tissue fluids are greatly diminished; the blood chemistry is altered with a rising sugar, cholesterol, and N. P. N., and fall in the CO₂ combining power. The entire physiological balance is disrupted by inadequate oxygenation, improper nutrition, and dehydration, all of which further handicap the already poor surgical risk. In short, the sooner the diagnosis is established and operation instituted after the patient responds from the initial shock, the better will be the ultimate outlook.

Death, contrary to the usual conception, is almost never the result of cataclasmic hemorrhage. Bleeding even after erosion of a large vessel is intermittent because of the fall in arterial tension and formation of soft thrombi which serve as transitory hemostatics to be forced out no sooner than one becomes encouraged by clinical evidence of improvement. A transfusion is best begun before operation and continued during and afterward if necessary.

In massive hemorrhage, a large vessel is usually eroded for as Sir Berkeley Moynihan

points out, massive hemorrhage is a late manifestation of ulcer and evidence of an active progressive process. In ulcer of the posterior wall of the duodenum, the pancreatoduodenal artery is the site of this erosion and in such bleeding it is obvious that early surgery is indicated. When large quantities of citrated blood can be poured into the veins using one or more needles simultaneously, much of the hazard is relieved in carrying a patient through surgery with a general anesthetic. Most continental surgeons advocate the use of local anesthesia to which they attribute their success, but in abdominal work, local anesthesia with splanchnic block is slow and cumbersome, and exposure is apt to be limited.

If surgery is decided upon it should be undertaken with a full appreciation of the magnitude of the procedure involved. Resection of a bleeding ulcer and reestablishment of the gastrointestinal lumen is not an operation to be undertaken without capable, trained operating-room help, a skillfully administered anesthetic, and cooperative management both in and out of the operating room. To escape a high hospital casualty list, the circumstances should be ideal and the operator a seasoned handcraftsman, well versed in the complications of gastric surgery.

The avenues of surgical approach may be grouped under two distinct headings: indirect, and direct hemostasis. A sufficient number of patients have been gastroenterostomized for bleeding ulcer to show that aside from its being an illogical procedure, it is of utter uselessness clinically. Simple pyloroplasty has likewise met with a high incidence of failure and jejunostomy creates an added menace to an already desperately ill patient. Furthermore, it seems logical to suppose that if bleeding would stop following a procedure which did not attack the bleeding point, it would probably have stopped without operation. This type of surgery is therefore mentioned only to be condemned, because of the reluctance with which it is being abandoned.

Indirect hemostasis in gastric ulcer has proved satisfactory in a number of cases because of the nature of the gastric blood supply. Quadruple ligation of vessels about the ulcer will not cause perforation as has been shown in animal surgery as well as clinically. In duodenal ulcer, however, the anastomotic arcades are so prolific that this is impractical, besides most bleeding duodenal ulcers are on the posterior wall. The branches of the pancreatoduodenal artery anastomose freely with the inferior pancreatoduodenal artery and at this point quadruple

ligation is practically impossible, while single ligation is not only difficult but useless.

Direct hemostasis may be effected by tamponade which is of course only temporary. Suture into the ulcer bed is unsatisfactory and actual cautery or diathermy though advocated by some, has been followed by recurrent hemorrhage after separation of the eschar. In the stomach, local excision or resection when possible is the procedure of choice. On the posterior wall of the duodenum, the ulcer is best treated after the method advised by Allen. The stomach is transected near the pylorus, the duodenum opened, and the ulcer exposed. Bleeding is controlled by placing a finger on the vessel and the posterior wall of the duodenum is then dissected free. Vessels are ligated as they are encountered and care is taken to avoid entering the duodenum or traumatizing the pancreas. The ulcer having been dissected free, it is resected when possible, but if not, the duodenal stump is closed and the Billroth II or Polya completes the procedure.

As a corollary to the principle of surgical attack upon peptic ulcer in the face of grave hemorrhage, the indication for interval operation upon ulcer patients who have suffered massive hemorrhage, is none the less clear cut. The rapid increase in mortality figures incident to recurrent severe hemorrhage has been clearly shown by Gordon-Taylor and upon this ground one can hardly confute the rationale of subjecting these patients to surgery at a time when conditions are at their best, in contrast to the drastic ordeal of operating in the presence of depleting hemorrhage.

In the study of a recent series of 58 cases of peptic ulcer seen in our private practice, and a group of 24 patients admitted to the St. Joseph's Hospital, Lexington, Kentucky, for upper gastrointestinal bleeding, some interesting observations have been made.

In this first group of 58 patients suffering from peptic ulcer proven at operation or autopsy, 50 of the ulcers were found on the duodenal side of the pylorus—an incidence of 86.2 per cent, a somewhat higher figure than is usually recorded in the literature. Of this group, 14, or 24.1 per cent of the patients were women. Twenty-two of the 58 patients suffered from one or more hemorrhages, all of which were duodenal in origin. This is an incidence of 37.9 per cent and of this group, one-third had two or more episodes of bleeding, one patient having had four. There were seven cases in which bleeding was of mild degree, six of moderate degree, and nine patients bled severely. The

criteria for judging the degree of bleeding is based on clinical evidence of those who vomited gross blood but were not in shock those who were in mild shock, and those who were in profound shock after the hemorrhage. In the group of 22 cases, one patient died, a mortality of 4.5 per cent. This patient was a man of 50 years of age who had, as proven by X-ray, a duodenal ulcer of seven years duration, and two previous episodes of severe bleeding. The onset of the third episode was characterized by a massive hemorrhage with profound shock and in spite of multiple small transfusions there were repeated hemorrhages during the course of four days prior to death. Autopsy revealed a large ulcer on the posterior duodenal wall which had eroded into the pancreatoduodenal artery, the walls of which were extremely sclerotic. Surgical intervention was discussed in this case but not considered seriously and the results indicate the bad judgment of not undertaking it.

In one patient who suffered from a bleeding duodenal ulcer located on the anterior wall, bleeding was controlled by excision of the ulcer and Judd pyloroplasty. Recovery was uneventful and there was no further bleeding. Another patient with a bleeding duodenal ulcer was treated elsewhere by quadruple ligation and posterior gastroenterostomy but afterward suffered subsequent bleeding. This patient was one of four operated upon for gastrojejunal ulcer, two of whom had severe hemorrhages, one of them a gastrocolic fistula. Two were treated by resection, and in the other two, ulcers were excised, the results being satisfactory. One patient operated upon for bleeding duodenal ulcer by using a quadruple ligation and posterior gastroenterostomy, died shortly after operation from a recurrence of the hemorrhage. Such misfortunes serve to emphasize the futility of a simple posterior gastroenterostomy in bleeding duodenal ulcers and raise a question as to the value of quadruple ligation as an additional defense. The incidence of jejunal ulcers and the frequency with which they bleed are likewise discouraging factors in the use of posterior gastroenterostomy supplemented by other procedures.

Through the courtesy of the staff of the St. Joseph's Hospital, Lexington, Kentucky, we have available the second group of cases. There were 24 patients in this series all of whom were admitted for hemorrhage; sixteen, or 66.6 per cent of them being men. Of those who suffered from mild bleeding there were four; from moderate bleeding, 13; while seven may be classified as having had

a severe hemorrhage. Six of these patients died. Two, aged 48 and 54 had large penetrating posterior wall duodenal ulcers with erosion into the pancreatoduodenal artery as revealed at autopsy. Upon one of these a posterior gastroenterostomy had been performed because resection was impossible and death was a result of massive postoperative hemorrhage. A third case died of postoperative peritonitis following excision of an ulcer. Bleeding in this case was of only moderate severity. The fourth patient was found at operation to have a ruptured esophageal varix with cirrhosis of the liver. Recently a 67 year old white male was seen in consultation who twenty years ago suffered from a large gastric ulcer proven by X-ray. During the past several years he had only vague digestive disturbances and was actively engaged in business. Six hours after a sudden, profuse hematemesis the patient died in spite of two transfusions. Autopsy revealed a cirrhotic liver and ruptured esophageal varix. The fifth patient died of hemorrhage from an erosion of the gastric mucosa which penetrated a small vessel. This patient had a stone in the common duct, an icteric index of 200, was extremely toxic, and very emaciated. The last death occurred in a 23 year old white male who during an acute exacerbation of a chronic alcoholism developed a severe gastritis and in spite of multiple transfusions died within 24 hours of the onset of repeated massive gastric hemorrhages.

In a survey of the combined total of 46 patients suffering from hemorrhage as studied in these two small groups, 21 patients were women. The average age of the entire series was 44.7 years. Five of these were in the third decade of life, while 13, 11 and 12 were in the fourth, fifth and sixth decades respectively, and five patients were over 60. The fatal bleeding in two cases was not the result of an ulcer. In this series there were 17 patients who may be classified as severe bleeders. Of this number, 7 died as a direct result of hemorrhage, a mortality of 10 per cent. Of these 7 deaths, three bled from erosion of the pancreatoduodenal artery, while the fourth bled from an erosion of a small gastric vessel. In each case the lumen of the vessel was found gaping widely at autopsy and the walls were sclerotic and thickened. These patients were 54, 48, and 50 years of age. The fatal bleeding in the other three cases was a result of ruptured esophageal varices from cirrhosis and gastritis.

CONCLUSIONS

It is becoming increasingly more evident

that the old "Laissez-Faire" policy of conservative treatment of massive hemorrhage from peptic ulcer may be relegated to the glorious realm of tradition, hand in hand with the too long revered doctrine that "bleeding ulcers rarely die". As to the former, progressive surgeons of the times have shown the advisability of early surgical intervention, and the obvious fallacy of the latter has been revealed by a large accumulation of statistical data. One cannot too strongly emphasize the sage advice of Finsterer regarding the 48 hour dead-line, for thereafter physiological alteration too often creates an unsurmountable barrier to ultimate success. The problem of diagnosis is often a matter of serious difficulty.

Operation is indicated when massive hemorrhage occurs from a known gastric or duodenal ulcer in a patient over 50 years of age; when massive hemorrhage occurs in a known peptic ulcer of long standing which has failed to respond to a careful medical regime; when massive hemorrhage follows one or more previous episodes of severe bleeding from peptic ulcer; and when massive hemorrhage of ulcer origin fails to respond to one or two transfusions and there is evidence of continuous or early repeated bleeding.

Preoperative preparation is the point upon which may hinge the success or failure of the surgical endeavor. Large quantities of blood not only may, but should be given before, during and after operation, and for this as well as the surgical procedure itself, well organized and highly coordinated team-work is essential. The choice of anesthesia is a matter of opinion and although many contend that local is the most satisfactory, not a few prefer a general anesthetic in the hands of a competent anesthetist. As to the type of surgery which is indicated, experience has shown that direct hemostasis, with a few exceptions, is the procedure of choice.

A speech made recently by Rev. Alphonse Schmitalla, dean of the St. Louis University School of Medicine, should be of interest to every physician especially those with hospital affiliations: "Never forget that you are paying your debt to the destitute when you give them freely of all you have learned of medicine. Medicine has an obligation to the poor. Upon whose bodies did you learn your medicine? You learned it upon the bodies of the poor . . . That knowledge of yours in your profession is your debt to the destitute. Pay that debt."

NEW REMEDIES AND OLD*

S. C. SMITH, M. D.

Ashland

Recent discoveries in medicine have led to an optimism that may be dangerous, especially in the hands of the over-enthusiastic. It is the purpose of this paper to warn against the tendency to regard some of these remedies as cure-alls and to emphasize some of the dangers that may attend the indiscriminate use of them.

Some biologicals have been in use for many years and have proven their worth, namely, Diphtheria antitoxin, Tetanus antitoxin, Thyroid and pituitary gland products and insulin as well as others of some value but not as positive and reliable as the ones mentioned. Many products have been put on the market by enterprising drug firms whose value has never been proven and probably never will be. Among this group are many for oral administration which are, in most instances rendered completely inert by the gastric juices and have little or no scientific back ground.

Some of the more recent discoveries are unquestionably potent in their action but sufficient time has not elapsed since their introduction to the profession to permit a proper evaluation of their clinical usefulness and to discover their potential dangers. The more noted in this group are the estrogenic substances made from pregnancy urine and the synthetic Testosterone Propionate. While they have a very definite field of usefulness they are not the key to the Fountain of youth and are not cure-alls. Some one said that the modern tendency was to treat everything either with pregnancy urine products, vitamins or sulfanilamide. This is an exaggeration but there is a tendency in that direction.

When doctors become faddists, the laity likewise becomes enthusiastic and are inclined to attempt to treat themselves with our new panaceas, many times endangering health and life by taking potent remedies about which they know nothing and encouraging commercial houses to exploit some of these products to their financial advantage. A recent example of this is the campaign among chain stores and others to make the public vitamin conscious so that they can sell vitamin compounds.

The medical profession often unwittingly aids this by handing out proprietary samples in the original package with its extravagant claims for the contents thereof, further

encouraging self medication. Only potent remedies are useful in real disease. It therefore follows that they should be prescribed only by a competent physician since indiscriminate use may be harmful.

It is much safer for the private practitioner to depend on the old remedies, tried and proven than to use new ones until such time as he may be able to gather sufficient knowledge of them to enable him to watch for the bad as well as the good results during the course of their administration.

Sulfanilamide—This drug is unquestionably one of the most valuable and astonishing of all discoveries of recent times and may prove to be so of all time. Its action in certain cases is nothing short of miraculous, especially in certain types of streptococcal infections. In fact if one believes the reports of most enthusiasts there are few, if any, infections that have not been cured by this drug.

Yet it is freely admitted to be a dangerous remedy and those taking it should be under almost constant supervision by a physician.

Its potentialities for good and for harm have not been fully proven and some years, perhaps, will have elapsed before its proper place in medicine is definitely established. Until that time arrives those using it must keep the caution sign prominently before them.

A newer compound of this drug—sulfapyridine, promises to enlarge the field of usefulness and holds out a brighter ray of hope for the pneumonia sufferer. The writer has administered it to only one patient, a man of 75, who died on the seventh day of his pneumonia. This is not a fair trial of the drug. Some of my friends report marvelous results, almost too marvelous it seems, since the results were quickly obtained, within the twenty-four hour period in some cases, leading one to believe that a mistaken diagnosis might have been possible.

Products of pregnancy urine, particularly Estrin and Antuitrin S have proven a field of usefulness but all their potentialities for good and for harm are not known. Estrin sold under various trade names will relieve the symptoms accompanying the menopause in most if not all instances. In combination with Antuitrin S it has in many instances caused an infantile uterus to develop to normal size and established regular menstrual periods in young women who had amenorrhea.

Antuitrin S in functional bleeding has given excellent results—in some cases, almost as brilliant as those of sulfanilamide in strep-

*Read before the Greenup County Medical Society.

toeocic infections. Its use in cryptorchidism has been successful in some cases and immature prostates have been caused to grow by its administration. Dysmenorrhea is reported to have responded satisfactorily also.

Testosterone Propionate—This is a synthetic goadotrophic hormone exactly like the hormone in chemical constituents that is obtained from the testes of animals. It is of unquestioned potency and value when indicated. The main objection to it at this time is the prohibitive price to the average patient.

It has been successfully used in cryptorchidism and is more satisfactory in this condition than Antuitrin S. Hypogonadism in the adolescent male has responded well to this treatment. It has benefitted the genitally hypoplastic adult, causing changes in voice, eliminated the feminine form and appearance, caused the growth of beard, genital hair and some growth in genital organs. All who have received this substance state they have a greater sense of well-being and many gain weight. By administration of this remedy, men suffering from hypertrophy of the prostate feel better, do not have to get up at night and have better results in emptying the bladder. It does not seem to reduce the size of the gland but does seem to arrest its growth.

Vitamines—There is an unquestioned field of usefulness for these drugs but until a better and more simple method of determining their deficiency in the human being, their use must necessarily be more or less empirical. That excessive administration can cause harm has been proven.

Recent reports show, for instance, that excessive doses of vitamine B will cause herpes zoster. It naturally follows that excessive doses of the other vitamins may cause their own particular type of disturbance.

High Speed Roentgenography—Beese believes that the chief advantage of using condenser discharges in roentgenography is the reduction of blurring caused by motion. This results in increased sharpness of detail. Other desirable features, such as uniformity of film density in successive exposures, are obtained because exposure times are eliminated. With a relatively small X-ray transformer and power lines of low capacity, one can do roentgenographic work equivalent to that done with the largest commercial X-ray machines.

GONORRHEA AND ITS COMPLICATIONS*

MOSES W. HOWARD, M. D.

Harlan

Gonorrhea is a simple, usually local and self-limiting disease. It is as old as mankind and more prevalent than ever. Society and scientific medicine has aided little in its control or eradication. A better understanding of sexual problems by boys, girls, men and women will aid in preventing many of the end results of a disease that is simple, if not mistreated.

Pelouze estimated that 50 to 60 per cent of all adult American males have had gonorrhea and about 80 to 85 per cent of all men in large cities contract the disease. Fortunately it is much less frequent in women, about 16 to 1, but, unfortunately, about twenty of every hundred married men contract the disease and about eight or nine of these twenty husbands infect their wives. No right-minded man would knowingly do this; therefore it is our plain duty to protect these innocent women by better instructions and care of the husbands.

Acute gonorrhea urethritis would be of little seriousness if it were not for the dangers of transmission, spread of the infection from the anterior to the posterior urethra is the rule. Acute posterior urethritis increases the gravity of the condition, acute seminal vesiculitis and epididymitis are then frequent.

When acute seminal vesiculitis, vasitis and epididymitis are found caused by specific or non-specific organisms, an infected urine is always present. The methods by which these organs become infected is simple. The intracystic pressure is increased by spasms of the muscle exerting pressure on the bladder contents, the muscle spasm being due to inflammation of the trigone and to irritation of the bladder mucosa by the infected urine. When this condition exists the slight added increase in the hydraulic pressure caused by lifting something heavy or by stepping off the curb may be enough to overcome the internal sphincter, thereby forcing urine under pressure into the posterior urethra, whose outlet remains closed by the external sphincter. When this happens it is easy to understand how this infected urine is then forced down the ejaculatory ductis to the seminal vesicles and on down the vas to the epididymus. The seminal vesicle is somewhat resistant to infection and it is not uncommon to find a prostatitis and epididymi-

*Read before the Letcher County Medical Society.

tis without the concomitant presence of a seminal vesiculitis.

Infections of the blood stream which cause septicemia, arthritis, iritis and endocarditis become imminent. A friend of mine on the medical service in the Boston City Hospital cultured gonococci from tenosynovitis or tendovaginitis. That is the only case of proven gonorrhea involvement of the tendon sheath, that I know of. A chronic stage is almost invariably the end results of spread of the infection beyond the anterior urethra, chronic urethritis, prostato-seminal vesiculitis, recurrent epididymitis and more rarely, urethral strictures are the complications in many patients with chronic gonorrhea who visit my office.

Fortunately, I have never yet had to operate a urethral stricture, except where periurethral extravasation was found and in many cases where the extravasation was not extensive. I have been able to pass the stricture and perform a simple I and D.

Where extensive extravasation is found the operation should be an emergency procedure and usually consists of an external and internal urethrotomy and multiple incisions over the extravasated area to allow for good drainage.

Gonorrhea of the rectum is rare. It occurs in the female from the spread of a profuse vaginal discharge, in the male as a direct infection caused in many cases by sodomy. It may give few symptoms at onset and become extremely chronic. The proctitis may be mild or, with penetrations of gonococci, periproctitis with anal infiltration and ulceration may result. Ischiorectal abscess and fissures or fistulae occur. The commonest sequela is condyloma acuminatum. Anal stricture may be the late effect. I will never forget a girl that I had as a patient while I was resident of the Urological Service at the Boston City Hospital. She had had gonorrhea of the rectum for about one year and had been treated by scores of doctors. We tried every kind of local treatment that we knew of and finally got results with daily intravenous typhoid injections, plus local rectal irrigations.

The treatment of gonorrhea changes each year and I will not take up your time with the pros and cons of every new treatment but will try to give you the meat of a few proven schemes of treatment.

You are all familiar with the use of sulfanilamide. You know that to get results the patient must be filled full of the drug; as much as he will tolerate. Dizziness, anorexia, nausea, rarely accompanied by vomiting, and headaches are the most common and usual

complaints of the patient taking the drug. Because of the dizziness one authority has even suggested that patients taking sulfanilamide should refrain from driving an automobile. I would like to stress this point because I firmly believe that it is dangerous to send a man to work on a hazardous job after having taken sulfanilamide. You would not let a man, while intoxicated, couple or drive a motor, neither should you allow a man taking sulfanilamide to do these hazardous tasks.

The nausea will usually be relieved by the second day of the medications if the patient is taking sufficient fluids and the dosage is not excessive.

Before the true effect of this product can be defined clearly, much more data will have to be gathered and many more carefully controlled clinical cases will have to be studied. I wish to bring it to your attention, that Rosenthal experimenting with sulfanilamide in mice, found that the fatal effect of the pneumococcus can be delayed for a considerable period by the drug and as he reports, "The chemical apparently has the power of holding the infection in check for a while, but eventually the chemotherapeutic effect is lost and the mouse succumbs to pneumococcal infections."

The most common treatment followed in my office is: instructions to the patient to take a bland wholesome diet with no highly spiced or highly seasoned dishes, to force fluids by mouth and to empty the bladder frequently. Emptying the bladder frequently lessens the danger of increased intracystic pressure, thereby decreasing the danger of epididymitis. No medication is given by mouth except a frequent glass of water, unless severe distress from frequency, burning and urgency are present.

The best local treatment for acute anterior urethritis is daily urethral irrigation with warm fresh 1:8000 potassium permanganate. 1:8000 potassium permanganate is weak enough not to irritate the urethra, but, if fresh, is strong enough to kill any of the organisms that it comes in contact with. I have never yet seen a doctor have gonorrhea, who did not develop complications from the disease. They disregard all knowledge they have of the disease and try to cure themselves within a few days by using too strong solutions and too frequent irrigations.

Let me refresh your memory on one very important point concerning the pathology of the urethra during acute gonorrhea. The organisms have, by the time the discharge is first noticed extended their field of activity beneath the mucosa to the submucosa

where they regenerate and die. Then decompose liberating an endotoxin which causes the inflammatory reaction. You can't reach the organisms with an antiseptic solution, however, heat, gentle distention and lavage promote healing.

Therefore it is foolish to use strong solutions on an already inflamed surface. You further devitalize the mucosa and as soon as the antiseptic is washed out of the urethra, you have a more fertile and extended field for the organisms to grow in.

John E. Heslin and William A. Milner published an article in the *Journal of Urology*, January, 1938 on the local use of arspenamine in acute gonorrhea urethritis.

They recommend the instillation of 2 grams of distilled water containing 2 decigrams of sulpharsphenamine into the urethra. The patient is to hold this in the urethra for 10 minutes by a small penis clamp, and to make if possible, daily visits to the office.

In the analysis of 53 patients who underwent the old method of treatment and 53 clinic patients subjected to the sulpharsphenamine local treatment it was found that 42 days were required to stop the discharge with the old treatment of 15.7 weeks to cure the case, while with the newer method the discharge was controlled in 19.3 days and cure resulted in seven weeks. Complications occurred in 14 of the old cases and only 7 in the new series.

As their experience with this drug increased, they noticed a slight tendency for the organisms to become resistant to the solutions and that when this was noted, a change to a protein silver preparation was advisable. They do not claim that the drug has some miraculous power of reaching beneath the mucosa to kill the germ but that its action must be through a local tissue reaction.

I am not entirely sold on this form of treatment, although I have had some good results in a small series of patients.

Fever therapy has proven a valuable adjunct in the treatment of gonorrhea. It is the opinion of some authorities that the thermal death point of the gonococcus and the human are so close as to make the widespread use of fever therapy too dangerous a therapeutic measure in the average case of gonorrhea. However, with the perfection of the hyperpyrexia apparatus by the Liebel-Flarsheim Company in Cincinnati, it is my opinion, that fever therapy in the future will play a great part in the treatment of gonorrhea.

We have already made arrangements for the purchase and installation of such an instrument in our hospital in Harlan.

Fever therapy by means of a hyperpyrexia apparatus has replaced intravenous injections of typhoid vaccine or similar agents which are given to produce febrile reactions.

Our routine was to give .2 cc triple typhoid vaccine in the vein and increase the dose by .2 cc each day for about 5 days. The patients would think they were going to die and frequently would be afraid they would not. No doubt some of them came close to the threshold of eternity. After the treatment they would feel so much better that they really appreciated being almost killed. We would make a 15 M. rectal temperature chart of each patient. The temperature would rise rapidly for about two hours to 105 degrees or 106 degrees F. and would fall almost as rapidly.

Owens, Wright and Lewis in Omaha, Nebraska, have a very interesting article in the December number of the *Journal of Urology*.

They conclude this article as follows:

1. In view of the growing reports in the literature, every case of gonorrhea should first be given sulphanilamide alone, using adequate dosage with all the accepted precautions against intoxications.

2. If this fails there are several alternatives.

(a) Fever alone, a single 10 hour session at 106-107 degrees F. will cure 80 to 90 per cent of these sulfanilamide resistant cases.

(b) A combination of sulfanilamide in adequate dosage with a 10 hour fever session at 106-107 degrees F. may be used and will probably cure close to 100 per cent of the cases.

(c) Probably in the near future a scheme of treatment will be worked out that will include preliminary adequate, sulfanilamide medication followed by a somewhat less prolonged fever session than the usual 10 hours at 106 to 107 degrees F.

3. Up to date, it is still our belief that artificial fever therapy is the treatment of choice for gonococcal complications.

Vitamin C Deficiency in Urticaria. — Since urticaria is a disease involving the blood vessels and the connective tissues of the body and since Vitamin C deficiency produces characteristic pathologic changes in these organs, Rosenberg investigated the Vitamin C content of the blood in seven cases of urticaria. The daily ingestion of from one to two lemons and oranges by the seven patients raised the Vitamin C content of their blood and the urticarial lesions did not recur after a few weeks of a diet including citrus fruit and fresh vegetables.

HYPERPYREXIA*

R. N. HOLBROOK, M. D.

Louisville

Since the earliest days of medicine, fever has been recognized as a manifestation of disease. Through the ages, as symptom or as a disease, it has held the continuing interest of physicians. In more recent years, fever has become recognized as a defensive mechanism of the body and the artificial production of fever has proved a useful therapeutic measure.

In the study of fever, there often arises the question: What is the highest temperature which the body may reach and still survive? The editor of *The Journal of the American Medical Association* (1) expresses doubt as to survival after a temperature of 108° F. and states that temperatures of 109° to 110° F. have been recorded before death. Reid (2) reports fifteen cases in which the temperature reached 109° to 110° F. three of whom survived.

My purpose in this report is to present a case in which the patient survived a fever of 115° F. and three times experienced body temperature in excess of 110°. Extensive search of the literature has failed to yield any report of such high human temperature with survival.

REPORT OF CASE

History: M. Y. H., a white woman, housewife, age 37 was admitted to Saint Joseph Infirmary November 22, 1936. She complained of a "boil" on the left hand.

The present illness dated back to about one month before admission when a furuncle developed on the left forearm. As this furuncle subsided, several similar lesions occurred on the left hand. She had no fever before admission and recent health had been good. The diagnosis upon admission was furunculosis.

The past history is an extensive one: chicken pox, measles, whooping cough, typhoid fever complicated by typhoid arthritis of and eventual ankylosis of the lumbar vertebrae, appendicitis, chronic tonsillitis, scarlet fever, with an accompanying nephritis, chronic cystitis, tuberculous nephritis, fibroid uterus, rectal fistula, hemorrhoids, sinusitis, several attacks of pyelitis, pyelonephritis and pyelonephrosis and furunculosis.

The following surgical operations had been performed: appendectomy, tonsillectomy, suspension of the uterine, right nephrectomy, hysterectomy, excision of rectal fistula, hemorrhoidectomy, extraction of teeth, submucous resection and drainage of nasal accessory sinus.

Physical Examination: She was sixty-two inches in height and weighed one hundred and ten pounds. Lying in bed, she did not appear particularly ill. There was a furuncle on the back of the left hand which had been incised and was draining pus. Other findings of the examination were essentially negative.

The temperature was 98, pulse rate 70 and respiration 18. The blood pressure in millimeters of mercury was systolic 110, diastolic 68.

Laboratory reports on the first hospital day were as follows:

Blood—Haemoglobin, 72 per cent; erythrocytes, 3,740,000; leukocytes, 7,200 with polynuclear percentage of 58.

Urinalysis—Appearance, clear; reaction, acid; specific gravity, 1.015; Albumin, faint trace.

Microscopic—Occasional pus cell, some bacteria, otherwise negative.

Culture of material taken from the furuncle yielded staphylococcus albus.

Clinical Course: During the six weeks beginning on the evening of the second hospital day the patient had a series of twenty-five chills lasting from five to thirty minutes. Each chill was followed by a sharp rise in temperature. During the first week, the highest temperature reached was 107.6° F. The second week the temperature rose to 110° F. There was general improvement in the third week and the highest temperature recorded was 107° F. During the fourth week, a temperature of 111° F. axillary was observed. There was improvement again in the fifth hospital week and the peak temperature was 107° F. It was during the sixth week following the final chill of the disease that the temperature rose to 115° F.

Realizing that we were observing an unusual phenomenon, the temperature was repeatedly checked orally, rectally and in the axilla using several different thermometers. The mercury in each instance rose to the top of the capillary tube. Therefore, it was necessary to extend the calibration to the end of the thermometer in order to read it.

The temperature remained at this high figure (115° F.) about eight minutes, when, with profuse diaphoresis, it rapidly became lower and reached normal in thirty minutes.

Complaining mostly of severe chilling and aching, the patient remained conscious until the temperature reached 112° F. While the temperature was at its height, the pulse rate was 140 and respiration 40. As the fever lowered, the pulse became weak and irregular. The patient was cyanotic and complained chiefly of dyspnoea and exhaustion. The

*Read before the Jefferson County Medical Society.

following day she was placed in an oxygen tent and oxygen was administered for ten days. No further chills occurred, and the temperature remained near normal.

Local treatment consisted of applications of hot boric acid compresses and infra red therapy. During the chills, hot water bottles, electric pads and additional bed covers were used. One fourth to one half grain morphine sulphate, hypodermically, was usually administered. After the chills subsided, ice packs were ordinarily applied and alcohol sponges given.

The remedy which demonstrated greatest effect during the course of the disease was the transfusion of whole blood. For periods of from two to five days after each transfusion no chills or unusual fever were observed. An autogenous vaccine, intravenous solutions of metaphen, prontosil and prontolyn were given. Intramuscular injections of pentoneucleotide were mildly effective in combating a persistent leucopenia.

Numerous blood cultures yielded no growth of bacteria. Following the fourth transfusion, the haemoglobin reached 103 per cent and the erythrocyte count increased to 5,700,000. The leukocyte count remained low, on one occasion being 4,300 and of the daily white counts made, the highest recorded was 10,500. The urea nitrogen and non-protein nitrogen content of the blood and the urinalyses remained normal throughout the course of the disease. This was especially fortunate in view of the presence of only one kidney.

The diagnosis was bacteremia, organism undetermined.

Subsequent History: One month after leaving the hospital the patient was re-admitted completely jaundiced as the result of acute hepatitis. This condition persisted for two weeks. Eight months later she was again admitted to the hospital suffering from chronic cholecystitis and a cholecystectomy was done. Her recovery, thereafter, was rapid and complete and she has remained in good health.

BIBLIOGRAPHY

- (1) Queries and Minor Notes: The Journal of the American Medical Association 110: 461, February 5, 1938.
- (2) Reid, W. D.: One hundred and fifty-eight cases of Heat Prostration treated at the Boston City Hospital July 2-13, 1911, Boston Medical and Science Journal, 165: 643 October 26, 1911.

Estrogen in Treatment of Fibro-Adenomatosis

—Sorensen made seventeen biopsies in sixteen patients, ranging in age from 16 to 46, with fibro-adenomatosis of the breast. In the eight untreated patients he found the hyperplasia of the intralobar connective tissue considerably more intense than in the nine who were treated with estrogen. In the patients treated with estrogen there was a remarkable succulence resembling normal menstrual edematization in the intralobar connective tissue.

PERINEPHRIC ABSCESS*

E. L. SHIFLETT, M. D.

Louisville

This paper is a summary of our experience with perinephric abscess and of our general knowledge of the subject. We reserve the right to change any statement as additional experience indicates.

We shall not attempt to distinguish between perinephritic, paranephritic, and perinephric or perirenal abscess as is done by some writers. We consider the perinephrium as an individual organ with its own anatomical characteristics. We believe this is necessary for adequate diagnosis, and particularly for roentgen diagnosis. If one speaks of perinephritis one more often thinks of a pocket of pus in some way connected with the kidney. The only basis for this thought is the close anatomical relationship of the perinephrium with the kidney. It needs be that every perinephric abscess results from a perinephritis and during this stage the symptoms may be classical yet the exploratory needle aspirates only blood and perinephritis is considered to be absent. The patient may be permitted to continue with his infection until pus is unquestionably present or he may be explored for some supposedly acute abdominal condition which is simulated. Our limited experience leads us to believe, but subject to modification, that every perinephric abscess is preceded, sometimes for considerable periods of time, by an acute or chronic stage of inflammatory infiltration without actual necrosis and that in some instances a roentgen diagnosis of infection of the perinephrium can be made before pus is actually present. Also, some secondary perinephric abscesses spontaneously resolve when the offending kidney lesion is treated by catheter drainage. This naturally brings up the question when an exploration should be made for a probable perinephric abscess. This is a responsibility of the judgment of the individual surgeon or the urologist.

Perinephric abscesses are classified as secondary or renal in origin and primary or non-renal in origin. Just as they present different clinical and surgical diagnostic problems, and favorable or unfavorable prognoses, they present different roentgenological problems, and as is true clinically, they cannot always be diagnosed or differentiated roentgenologically.

Perinephritis or perinephric abscess may be acute or chronic, the latter extending

*Read before the Jefferson County Medical Society.

over a period of months or years. Since the pathologic process is different, there are different symptoms and physical findings as well as different roentgenological criteria and the chronic perinephritis may be mistaken clinically for an intra-abdominal or retroperitoneal malignancy and roentgenologically for a retroperitoneal neoplasm.

The difficulty of clinical diagnosis is evidenced by the patients who are brought to the hospital in severe emaciation and cachexia with large bulging masses, who give the history of having been incapacitated or bedridden under a physician's care for months before admission, and also by the occasional exploration of the abdomen for some simulated acute condition. Any procedure which can offer aid in the clarification of such a difficult clinical problem certainly demands the most serious consideration. Our purpose is to point out how and why the complete roentgen examination is helpful in diagnosis and with the advent of intravenous urography, can be carried out in some cases, though not advised, without the aid of the urologist or surgeon. The specialty of X-ray brings the roentgenologist in contact with all groups of practitioners and he is directly responsible for numerous cases reaching the surgical specialties, by discovering unsuspected lesions which have caused clinical confusion by their atypical clinical syndromes.

The success of roentgen diagnosis depends upon the interpretation of pathologic patterns through the medium of shadows into clinical entities. Many failures are due to attempts to interpret clinical symptoms into a pathologic entity. Clinical, pathologic and physiologic knowledge are absolutely essential but the information is used differently as a means to an end.

The approach to roentgen diagnosis is just as important as the approach to bedside diagnosis. Many will accept this and the many who do not will say it cannot be done. The only justification for such a statement is an apology for inadequacy.

The choice of procedure should be selected carefully and a critical and logical analysis should be made of every item portrayed by the roentgenogram. Insignificant variations, which, when considered by themselves are meaningless, become definite links in the chain of evidence permitting a diagnosis when considered conjointly.

The primary roentgenogram, retrograde pyelography, and other injection techniques, and intravenous urography permit us to study the form of living pathology, the

growing pattern modified by the etiology and relationships to other organs and the abnormal physiologic dynamics as the body attempts to adjust and protect itself to an abnormal state.

One must attempt to determine whether there is normalcy or abnormalcy, and if an abnormality is present, is it congenital, primary or secondary, neoplastic or inflammatory, and as discussed in this paper, if inflammatory is it acute, chronic, or acute and chronic and where located. In the vast majority of cases one can determine which is present because the morphology, the quality of tissue densities, the function reactions generally, and the renal and ureteral dynamics and function particularly vary with different lesions and in some instances almost specifically.

The acute primary perinephritis or perinephric abscess gives us a kidney shadow of the acute reactive quality because of edema, hyperemia, and swelling of the kidney and the perinephric fatty capsule. This type of kidney appears in the presence of acute ureteral obstruction or acute infection of the kidney or its capsule. Psoas muscle spasm and lumbar scoliosis with the concavity to the affected side, splinting of the diaphragm and the lower half of the corresponding hemothorax, and hypo-aeration of the lung base are just as reliable roentgenological signs of irritation and therefore probably infectious in origin as they are clinically reliable for such and therefore point the way in analysis. Elevation of the corresponding leaf of the diaphragm, particularly posteriorly and medially, flaring of the lower ribs, displacement of the kidney, an increase in density of surrounding tissue, displacement of the colic flexures, and possibly isolated masses are all signs of increased bulk in a space created to accommodate only the normals, and there is nothing in these signs contradictory to an infectious process indicated by the physiological changes noted above. A localized inconstant ileus confined to the involved quadrant fits well into the pathologic process because of the peritoneal irritation. A contiguous inflammatory reaction of plastic quality in the base of the adjoining lung or pleura is not contradictory but supportive. Sometimes all these signs, but more often some combination of several of these signs can be detected from the primary X-ray of the urinary tract. These objective pathologic and physiologic criteria indicate infection in the kidney or perinephrium. We have not gone far enough for positive diagnosis.

The routine retrograde pyelogram may be entirely normal in the primary or non-renal type of perinephritis and this is not easily refuted for autopsies have shown that we may, and frequently do have normal kidneys in the primary perinephric abscess. The lateral pyelogram usually shows the kidney displaced anteriorly to variable degrees because displacement in this direction is natural since it could not very well be displaced backward and the increased bulk of tissue must be accommodated for in some way. The entire kidney may be forward or only the lower pole may be forward, this vertical rotation usually being slight to moderate in degree. Since the natural extension of infection of the perinephrium is downward along the peri-ureteral sheaths, the ureter becomes displaced anteriorly and follows the peritoneum forward.

We have now established that a perirenal infection is present, that the kidney is organically normal. We can now assume that a primary perinephric abscess is present. We have seen the perinephric abscess descend below the bladder and push it forward. The associated bladder spasm and irritability of the ureter indicate that it is an extension of the infectious process from above. This type of perinephric abscess may be difficult to differentiate from a true psoas abscess. We have not had the opportunity to study the psoas abscess by this method.

In the renal or secondary perinephric abscess the retrograde pyelogram may show any one of the various kidney infections or suppurative lesions such as suppurative pyelonephritis, renal carbuncle, the acute hematogenous septic kidney, pyonephrosis, cortical abscess, etc. as the original lesion which has probably ruptured in the perinephrium. The lateral pyelogram will show some variable from normal as above described. One can now assume that he has a secondary perinephric abscess.

If the lesion of the kidney is associated with ureteral obstruction which prevents catheterization and retrograde pyelography, or there is such severe damage that there is no function by intravenous urography it is often impossible to determine whether or not there is a perinephric abscess complicating a pyonephrosis or other septic renal lesion because one cannot determine the position of the kidney, and the acute reaction on the chronic obstructed kidney sometimes simulates the acutely inflamed perinephrium. A lateral pyelogram cannot be made and the position of the kidney cannot be determined. Therefore one does not know whether or not he is dealing with an acutely infected hydro or pyonephrosis alone or associated with

a perinephric abscess. Sometimes, since the long obstructed kidney shows atrophy with replacement fibrosis of the parenchyma and the perinephric fat, the structure becomes more or less the same density as the surrounding supportive tissue and although the kidney may be larger, it cannot be seen distinctly or not at all, and one can assume with a reasonable degree of accuracy that a chronic kidney lesion is present and therefore a probable origin for a perinephric abscess.

Intravenous urography is not a good functional test in the same sense as the mosen-thall, urea clearance, or phenolsulphonephthalein. The visual concentration of the dye means little and often the best filled pelvis are the diseased ones because of absence of contractibility of the pelvis and ureter associated with stasis. I think it is valuable to determine the time of appearance and therefore urography is analagous to the methylene blue or other similar dye tests which indirectly indicate degree of renal damage. If we want to detect slight impairment of function we make films immediately and as rapidly and as often as necessary. Usually when five minutes have elapsed one has lost the opportunity to detect the lesser degrees of impaired function. I do think that intravenous urography has contributed another very valuable diagnostic phase to urology and that is, physiologic dynamics, which we find as valuable as the excretory phase. We must distinguish between excretory function and dynamic function. I am unalterably opposed to compression techniques for if the ureters can be compressed to partial or complete obstruction the physiologic reaction of the kidneys is that to an obstruction but an artificial one, and therefore interferes with correct interpretation. The dynamics vary with the type of lesion, sometimes almost specifically. We have used it in a few cases of perinephric abscess. The response is sometimes striking and establishes the pathologic kidney almost immediately provided there has not been a previous disease causing infiltration of the kidney pelvis. There is a complete absence or markedly decreased preistalsis of the pelvis and ureter, and I like to think of it as a condition analagous to an ileus. These dynamics are seen in acute calculus obstruction but not in chronic calculus obstruction, following the passage of a calculus in acute calculosis and in some acute infections of the kidney parenchyma such as miliary cortical abscesses. There is static drainage, the pelvis fills and overflows into the ureter, the organ itself apparently making no attempt to propel it along its normal course. This stasis makes intravenous

pyelography very satisfactory in the study of this type of renal infection because the stasis permits lateral urography, the information from which permits correct localization. We do not offer these opinions as final since our series of cases of perinephric abscess is too small for final conclusions. It would be helpful if the observations on renal dynamics by various men could be accumulated. Certainly it would be a valuable addition to urology.

Every intravenous urogram has individual variables of characteristics just as surely as the individual patient is subject to variable complexes, yet all are suffering from the same clinical entity. It is the roentgenologist's duty to seize upon these variables and correctly evaluate them. It can be done and those who say this is not true need to develop a different approach to urographic diagnosis. The roentgenologist is not infallible in his interpretations, neither is the surgeon, the urologist or the internist in the analysis of urinary symptoms. The value of an X-ray examination is directly proportional to completeness and to the ability of the roentgenologist.

In our series, where these principles have been applied, we have been able to make an unqualified statement that a perinephric abscess was present in 71.4 per cent and correctly localize the pathology retroperitoneally in 100 per cent of the cases. Our errors were in one case of chronic indurated perinephric abscess in which the clinical diagnosis was carcinoma of the cecum, the urological diagnosis was a tumor of the kidney and the roentgen diagnosis was retroperitoneal tumor, probably a sarcoma. Patient recovered with drainage of a chronic perinephric abscess. This was probably primary in origin since no disease was demonstrated in the kidney. The other was an advanced pyo-hydro nephrosis in which a perinephric abscess in addition was found at operation. The pyonephrosis was detected and correctly interpreted. The abscess was missed.

We have made the diagnosis of perinephric abscess once in which there was no abscess, but an extensive pyonephrosis with much pus, or an error in this direction of 11.1 per cent. In no case where we have used the lateral pyelogram to exclude a perinephric abscess in the presence of a septic kidney have we been proven in error, either by the clinical course or surgery.

DISCUSSION

Joseph C. Bell: This is an excellent paper on the subject of perinephric abscess. The essayist has covered the field so thoroughly

that there is little that one can add to the material already presented. He has reviewed the pathology of this condition and presented the x-ray findings in this disease. Attention has been called to the normal variations that are observed in the various examinations used in the diagnosis of this condition.

He has shown the importance of the lateral film in the diagnosis of perinephric abscess. Films made in this manner are undoubtedly of greater importance than has been recognized heretofore.

Doctor Shiflett does not approve of the use of compression in the intravenous type of examination in this disease. I am in accordance with his views in this but do use compression during a part of many other intravenous examinations of the urinary tract.

D. Y. Keith: To be a good physician one has to be a careful observer of everything he sees, and this is particularly true of roentgenologists. The changes seen on the X-ray films from which the slides are made that Dr. Shiflett has shown, are much more distinct than one can show on lantern slides. The careful roentgenologist though, will frequently get a clue from his primary film. A much better clue from the orthodox pyelogram will make him believe the pyelogram is indicated. After he has seen a few correct diagnoses made from the lateral pyelogram he becomes a believer.

It is particularly convincing to the urologist, and it is the cooperation between the roentgenologist and the urologist that makes this particular work worthwhile. Without it neither could make a diagnosis. Combined, the diagnosis is practically made that has been overlooked by other urologists.

E. L. Shiflett, (in closing): Regarding Dr. Bell's remarks about compression technique. In the occasional individual this may be advantageous. I have tried it but have not been satisfied with results. It is my firm conviction that compression technique prevents the greatest ultimate information from urography. We do not sacrifice morphological pathology by not using it, but we are able to correlate excretion, dynamics, and morphology to more comprehensive diagnosis. We are primarily interested in the exact organic and functional state of the kidney as it exists now in the body untouched, and uninfluenced by artificial means which permit us to determine the why and how of clinical symptoms. These septic kidneys appear entirely different to the surgeon and the pathologist, because the actual state and appearance have been influenced by the appliance of external forces and factors. They see directly only the morphology. The recording of living pathology and abnormal

function in what we might term virgin soil is a unique property of X-ray.

I want to express my appreciation to the staff of the Kentucky Baptist Hospital who have always been most courteous and sincere in their cooperation in the examinations of these patients, and my association with them has been most delightful.

PSYCHIATRIC PROBLEMS FRE- QUENTLY ENCOUNTERED IN PRIVATE PRACTICE*

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The four types of psychiatric problems most commonly met with in private practice are (1) the frank psychoses, (2) the so-called psychoneuroses in which there is no discernible organic disease; (3) exaggerated reactions to organic disease which seem to be disproportionate to the amount of pathology found; and (4) simple personality problems presented as such.

Before taking up each of these divisions in more or less detail, let us consider some accepted concepts of the human organism. Generalizations are always dangerous, but for purposes of orientation it may be well to consider a few of the fundamentals. Every individual who comes to us for medical help is unique in that he is the only person exactly like him who has ever existed. By that is meant, he is the only human being who was ever born to the same two parents at the same time and has had exactly the same experiences. Granting this concept of individualization, it is immediately obvious that many broad generalizations do not hold good for an understanding of this personality and its inter-personal relationships, any more than does a diagnosis of pneumonia outline the entire treatment of a case.

Various factors which enter into the total picture must be considered and our treatment modified accordingly. Further, it is equally ridiculous for us to assume that when a patient has enough difficulty to bring him to consult a physician that he is not suffering from a real illness. The mere fact that we are ignorant of the pathological process at work does not entitle us to use such medical swear words as "hysteria," "malingerer," or "neurotic." It seems rather presumptive to recall to you that not a great

many years ago the pathology of diabetes was unknown and, even more recently, we knew nothing about its scientific treatment. New surgical techniques have been introduced. Infant mortality has been lowered—medicine is moving forward. Therefore, although we do not know positively the pathological process involved, we have no license to state that we will never discover it. It may come to light accidentally or through purposeful research. We may find that every tack we have taken has been the wrong one. The basis for personality dysfunction may be found in the field of pure behaviorism, biochemistry, endocrinology, bacteriology, neurophysiology or some field as yet entirely unknown to us. In the light of knowledge, all things become simplified, and so many illnesses which baffle us today because of our own feelings of inadequacy may some day yield to one dram of X compound—T. I. D. p. c. This makes interesting speculation, but to date we do not know of such a compound and until this compound, or its counter part is discovered, we must continue to apply that which we do know.

Being physicians, we are aware of the absolute inseparability of the mind and the body. The older concept of psycho-physical parallelism has been invalidated by common sense. We are all more or less aware of certain bio-chemical, endocrinological, neuro-physical and circulatory changes which follow closely upon the heels of rather commonplace experiences such as fright, sudden bad news, or a highly amusing incident. The complexity of this inter-play is only partially understood and is referred to rather glibly as an emotional reaction, the intensity of which is again a highly individualized experience. At times rather profound physical manifestations are found as the result of one word or even a look. These we interpret as being normal, by which we mean, within the range of the usual but when these reactions become so bizarre as to take the form of conversion hysteria or anxiety attacks, is it not logical to suspect some pathological process at work, the exact nature of which is unknown to us? Perhaps what we are witnessing is simply a conditioned reflex, set off by an isolated idea of complex association of ideas, the actual basis of which may have been a painful or unpleasant experience wilfully forgotten.

Freud and his followers have taught us a lot about human behavior, but one feels that their greatest contribution was in the organization of terminology and nosological

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psychiatry. There are those of us who are forced by common sense to question some of their concepts of the unconscious and the motivating force of infantile sexual experiences. We are dynamic, living organisms who change from day to day. We cannot ignore the fact that many early impressions remain with us throughout life. This is a well known and irrefutable fact. Obviously we have had experience, a clear memory of which is not always before us, but I choose to think of them as memories and associations upon which we are not concentrating at the moment, but which when the need arises and their importance warrants it, could be recalled. We often have had the commonplace experience of hearing a song or smelling an odor that conjures up a whole series of associated memories, some of which are pleasant and others unpleasant. Facing reality in the form of facts is the chief aim of all psychotherapy.

Too many factors play important roles in our lives for us to disregard any one of them. The old academic discussion of heredity versus environment seems to be a relatively unimportant problem. Heredity and environment are important and their relative roles are what we as physicians must evaluate. We must interest ourselves in everything which concerns our patient if we are to understand him as psycho-biological unit. Happenings which to one person may have practically no significance may be of tremendous importance to the next one. Anything which has to do with our patient's inter-personal relationship is of importance to us, as physicians.

If from your experience, you allow that foregoing concepts are based on common sense and scientific medicine and not on theory, then immediately the treatment of the patient, whose personality adjustment is not ideal, becomes more hopeful.

It has been reported by various investigators that between 24.4 and 60 per cent (or an average of 42 per cent) of all patients who seek help from a physician are suffering primarily from some sort of nervous disorder, excluding frank neurological cases. If this be true, then we are talking about some 42 per cent of our cases.

Before considering in detail the type of case usually met with, it is well to understand the clinical entities are not sharply defined. Hypochondriasis, for instance, is often found as a symptom in acute depression, simple dementia praecox, hypomania, psycho-neurosis, and just plain "worries."

Paranoid trends are not limited to true paranoid states, but are found in varying

degrees in acute manic attacks, paranoid type of schizophrenia, persons seeking more City, State and Federal relief, as well as in many other normal situations.

Euphoria, or state of well-being, commonly thought of as being typical of acute maniacal attacks, is often found in medical students after having passed all of their examinations.

Suicidal trends are not limited to depressions, but can occur in anyone. This drive is infrequently executed, but I doubt very much if there is anyone present who at some time or another in his life has not toyed with the idea of suicide as a solution of his difficulties.

And so we see that many trends which are blatantly brought forth in some illnesses are not unusual in normal people.

Let us now consider the types of problems with which we have to deal.

The psychoses: It was once held that most people who developed a full-blown mental illness were always impaired in their functioning, even though a degree of recovery did seem to be present. We know now that this is not true as we have seen many people with an acute mental illness, completely recover, take up their work again, and quite often with an increased ability to get along with life in general. The various adjuncts to therapy, such as occupational, hydro, physio, and recreational therapy, all have their place in rehabilitating the individual. These specialized therapies do not necessitate an elaborate lay out. All of them may well be given in the home.

Occupational therapy may consist of tidying up the house, knitting, building air plane models, or cleaning the car. The important thing is that the patient be occupied, gainfully if possible, but occupied. The potential dangers of prolonged bed rest with consequent inactivity should be borne in mind.

We have all experienced the sedative effect of a warm tub bath, which type of hydrotherapy may well be used to help control restlessness or insomnia. Wrapping the patient in sheets wrung out in cold water has often an initial feeling of chilliness but a restful, quieting result. The stimulating potentialities of a cold shower may be of benefit.

Modified massage and heat treatments can easily be done without requiring a qualified masseur or extensive equipment.

Recreational activity can be carried out in the home, for all play does not require tennis courts or golf courses. The important aspect of this is that it be given under

the physician's direction and suited to the individual needs of the patient.

Some of the frank psychoses can be treated in the home, others are more effectively cared for in a hospital. Suicide is an ever present danger in some mental illnesses, homicide less frequently so.

The use of insulin and metrazol has tended to make the outlook in dementia praecox more hopeful but their use in the home is not satisfactory because of the potential dangers.

Early diagnosis, specific anti-leptic treatment, and malaria have revolutionized the outlook in paresis.

Encephalo and ventriculographic examinations have allowed for earlier diagnosis of organic brain disease, with a consequent better prognosis.

There is little doubt but that an early diagnosis allowing for earlier instigation of treatment is of benefit in a mental illness just as it is in every other disease process. In a word then, there are some frank psychoses which can be treated in the home and others which by their very nature demand hospitalization and the basis for decision as to the place and kind of treatment must be the needs of the individual case, based upon a thorough knowledge of all the factors which play a part.

(2) The so-called psychoneurosis in which there is no discernible organic disease.

This group probably comprises the greatest number of psychiatric problems seen by the average physician and are the most difficult and discouraging to treat. Here are found the "shoppers" who most probably will have been to see many physicians before they come to you. Their aches and pains are innumerable and widespread. They cover every part of the anatomy and every function of physiology. They very often will have been operated on for some pathology and will have transferred the focus of their attention to some other part. They might have had dental extractions; they probably will have taken glandular extracts, tonics, and innumerable patent medicines; they will have done what Grandma told them, followed the therapeutic regime outlined by Aunt Agatha, and may have bought an electrical appliance or two. They constitute the greatest challenge to the busy physician's time and patience. They are the group to whom the greatest number of medical swear words are applied such as, neurotic psychasthenic, hysteria, and others less delicate.

What then is to be done for them? One does not under estimate the challenge which they present, but in general many of them

definitely can be helped by the following procedure, which is obviously time-consuming and certainly is not guaranteed to be 100 per cent efficient. They should be listened to completely; their symptoms carefully considered; their whole environmental and interpersonal relationships should be studied, for, as we all know, the things of which a patient complains may be quite unrelated superficially to their causative factors. Having evaluated their symptoms, a thorough physical examination with all laboratory adjuncts is indicated. Very often at this point the patient may be found to be suffering from some tangible dysfunction which can be corrected. On the other hand, if no discernible pathology is uncovered, this should be explained to the patient in the light of the immediate findings. Symptoms are often nursed by us through too frequent physical examination, so that there comes in the mind of the patient a feeling that perhaps the physician is not entirely sure as to the existence of organic pathology. This obviously defeats our purpose. Then comes the time-consuming attempt to evaluate all the life factors and the patient's interpersonal relationships in the light of his own emotional reactions thereto. Very few patients become distressed or impatient with intellectual honesty. Occasionally it becomes necessary to tell the patient that one realizes that he is suffering and in general is an uncomfortable person, but there are certain things which he can do to help himself and these must be insisted upon medically. Since there are twenty-four hours in a day and we see our patient for a relatively short while, it is well to place many of them on a schedule which they must follow religiously. This schedule should cover the entire 24 hours, and provide the patient with the four "musts" for a well balanced life, namely, work, play, exercise and rest. Sleeplessness may be a large factor, but is best handled by hydrotherapy, as certain seemingly safe drugs are potentially dangerous, particularly bromides, as the toxic effect of this medication may begin a vicious circle, ending in a true psychosis. On the other hand in spite of the pressure on the physician, pink pills or other placebos do not allow us to deal with our patients on an honest basis and are, therefore, often harboring the very element we are trying to defeat.

One realizes the inadequacy of this group of generalizations and there is nothing new in this formulation of treatment, but here again the emphasis must be upon the individualization of each case.

(3) The exaggerated Reaction to Organic Disease, which seems to be disproportionate to the amount of pathology found.

We have all seen patients who were able to stand what we felt must be excruciating pain with complete equanimity, and on the other hand, we see those who show a tremendously exaggerated reaction to what seems to us to be mild discomfort. Over this again we throw the encompassing cloak of individuality. However, if some formulation of the expected discomfort is made to the patient, we see the reaction in many cases greatly decreased. Occasionally we find an individual who can carry along very well in his interpersonal relationships without any appreciable difficulty so long as his physical health is good. But the balance seems, in some instances, to be so fine that even the common cold may tip it over, and as a result we see exaggeration of normal bodily sensations. Many mild hypochondriacal states often follow such illnesses as influenza or gastrointestinal upsets. Here again complete pathology is unknown to us, but at least we as physicians feel more comfortable in dealing with this type of reaction for we do see some organic basis for the syndrome presented.

The treatment for this type of reaction is, I am sure, obvious. Treat the original disease process and simultaneously take up with the patient his own attitudes toward illness and pain in general and to this present illness in particular. Reassurance on the part of the physician and acceptance on the part of the patient tend to rapidly clarify this difficulty.

(4) Simple Personality Problems as Such:

By this one means that there is no conversion into physical difficulty or illness, but a simple statement of a personality problem. This type of difficulty has been treated by physicians since time immemorial—and rightfully so—for the physician as consistently as anyone else maintains an objective attitude toward his patient. We are all familiar with the general type of personality problem presented, whether it be bickering in the home, financial difficulty, frigidity or impotence, mother-in-law troubles, or the son's grades in school. One knows the solution to problems that often comes simply from unburdening and it is well to be aware of the dangers of giving specific advice. The best advice is given by asking the patient's own solution to the problems and suggesting potential dangers in certain proposed procedures. If the patient makes his own decisions with your help, he is likely to carry through and should they not work out comfortably for him, he is not in a position to blame the physician for assumed omnipotence. This again is highly individualized for what would seem to the physician to be a perfectly

simple and logical solution to a problem may not at all work out for the patient.

In summary then, an attempt has been made to formulate in common sense terms some general concepts of psychiatric thought, minimizing theory and stressing practicality. The potential dangers of outlining general treatment are obvious and the fact that they are very often time-consuming (so much so that management of many of them is impractical) is also immediately apparent. However, if we can think of our patients as being psycho-biologically integrated units who have ideas, feelings and attitudes not greatly different from our own, perhaps only in degree, a tolerance will be developed, which will materially aid us in the rehabilitation of the individual. If we are able to appreciate the fact that the patient would not come to us if he did not need help, we might more effectively alleviate that need.

And finally, if we can assume through our medical knowledge a more hopeful attitude toward certain of our patients, that attitude will soon reflect itself in the form of results.

DISCUSSION

W. E. Gardner: We are indebted to Dr. Keller for this splendid paper so beautifully presented. He has brought it to us in plain common sense and made it important and understandable to a mixed group of physicians. Criticism has been made of psychiatrists that they talk in complicated language. In recent years, however, we are seeing a trend toward more simplification of terms and a coordination of psychiatry with other branches of medicine. Just as the internists recognize the psychiatric phase of patients, so the psychiatrists are relying more and more on internal medicine for help. In the acute types, we have acquired tremendous help from the internists. We have learned much more about the care of the acutely ill patient; the diet in cases of exhaustion, the importance of fluids and keeping up the blood plasma bicarb, or alkaline reserve; in the polyneuritic psychosis, the importance of vitamin B. Most physicians come in contact with these cases. There are, furthermore, sometimes psychiatric symptoms following surgical procedure. As far as swear words are concerned, I believe they are used less than a few years ago. Physicians now recognize neurotics and psychotics as individuals who are suffering from illnesses just as honorable as the medical and surgical cases.

Dr. Keller spoke of heredity and environment. It has been said that all of us have an heredity which is not the best, and yet perhaps it is not the worst. As time goes on, environment is shown to play a more important part

than many believe. Speaking of heredity, I recently heard the following story "Charlie McCarthy, the wooden dummy, was asked about his ancestry. He stated that he had been told that he was conceived in a forest and did not know all the circumstances, but had understood that his mother was the daughter of a virgin poplar and that his father was a son of a beech." We should not be too discouraged, therefore about an heredity which is not so good.

We must bear in mind the importance of considering the whole individual, as referred to by the essayist, and his type of reaction to the situation which confronts him. Dr. Keller was with Dr. Adolph Meyer in Baltimore for a year. The latter has, for many years, been the chief proponent of the concept that one must think of the total individual as a psycho-biological unit, and not try to separate him into mental and physical. Reference was made to investigation from the standpoint of biochemistry, endocrinology, bacteriology, neurophysiology etc., all of which play an important part; and there is the inter-personal relationship which was stressed by Dr. Keller, and which should not be overlooked. Personalities may be tremendously disturbed in their human relationships by the people with whom they come in contact, and this may produce internal emotional tension sufficient to account for many neurotic and psychotic symptoms. I heartily approve the methods of treatment as briefly outlined by Dr. Keller, especially the psychotherapeutic procedure of "unburdening" to which he referred.

I want to express again my appreciation of the paper, and the excellent way in which it was presented. It has emphasized the point that we must think of the total individual and we should not lose sight of the fact that he has social, economic and ethical, as well as clinical relationships.

John Noren: I must confess that I was far more interested in the essayist than I was in the essay. It gives me a great deal of pleasure to see the son of Dr. Billy Keller make the speech he did here tonight. Those boys that remember Billy Keller know that he would be proud to hear such a talk from his son. But what would you expect from the son of Billy Keller?

I could not keep from comparing notes in listening to Dr. Keller tonight and the talks made some 25 to 40 years ago. They are quite different. There is a different attitude towards mental conditions today than at that time. That is progress. I want to say here that I do not believe that the functional diseases or the psychoneuroses, psychasthenias, should be classed among the cases of psychiatry. I

can't quite accept that. I believe they can be handled better away from those other mental cases than with them.

As for heredity, the more cases I see the more I believe in heredity. I made this statement before. Dr. Pusey once said, "If you want to see where insanity comes from, come out to the asylum on visiting days." I believe in stock, and if you have good stock the offspring is going to be pretty good. I believe in heredity, in stock. I see that every day.

Dr. Keller referred mostly to the psychoses and psychoneuroses. I want to show you a diagram that has helped me understand them. It shows at what time of life we expect to see certain diseases. There are three parts designating evolution, maturity and involution. From 10 to 15 years we have the psychoses, the neuroses of adolescence and puberty. At 25, dementia praecox. This is the evolutionary side of life. Heredity is of more influence in those cases. On the maturity side, from 25 to 35, the manic depressive, the toxic, exhaustive phases. From 35 to 45 are general paresis, the alcoholics. From 40 to 50 the menopause psychoses. From 50 on, the degenerative diseases, senile dementia. That prognosis is bad—the machine has run for fifty odd years, and begins to wear out. But if you remove the cause, the individual will carry on pretty well. This diagram illustrates the three periods of life: the period of evolution, of maturity, then involution. I got this from a book on old age, which is one of the most consoling books I have ever read. It shows the rise and fall. We might as well accept it and carry on.

H. E. Richey: As a member of the program committee I particularly requested this paper by Doctor Keller for I felt it was an ever present problem to us all in the profession and one which we all inadequately meet.

I am sure you all have had these problem cases which are so difficult to treat and control.

Two questions occur to me: (1) What is the factor of heredity in the development of the psychotic individual? (2) Does psychotherapy help us in managing these patients?

I wish to call your attention to the emphasis Doctor Keller has placed on a complete physical examination and history, both medical and sociological, going over them carefully and ruling out any organic lesions.

Perhaps in general practice we have not been interested enough in such cases to delve into their past life and marital and sexual problems.

These points about home treatment, hydrotherapy and occupational therapy, seldom occur to us as an affair applicable to home prescription but is usually associated only with institutional or hospital care.

W. K. Keller, (in closing): In this paper my intention has been to stress heredity and environment. To over-emphasize heredity, is often putting a stamp of finality on our cases. Many other factors play their part and cannot be ignored when considering the whole picture. In the case of identical twins, we sometimes see one of them developing a mental illness, while the other remains perfectly healthy. Surely, heredity alone does not give us the answer to this question. Here again we must consider all the facts pertaining to the case.

Dr. Richey asked about Psychoanalysis, by which I assume he meant Psychotherapy. Freudian Psychoanalysis demands the acceptance of unconscious mental processes, the doctrine of "transference" toward the physician, and the acceptance of infantile sexuality. This is a very time consuming procedure and is, therefore, impractical for general use. What you want to know is, having gathered all the factual data, how to use this material. This is not bounded by any rules, or regulations, but calls for a practical application of common sense, based on the material at hand. It is for you to evaluate those things which are modifiable, and those which are not. The course of treatment is outlined by the facts which you have discovered. The whole emphasis must be upon the individual, considered in the light of the whole setting.

THE EMERGENCY TREATMENT OF AUTOMOBILE INJURIES*

PAT R. IMES, M. D.

Louisville

Since surgery is essentially the study of wounds and so many wounds are etiologically accidental, and a major cause of the latter is the automobile, it might be well to consider what can be done early in the treatment of these injuries to improve the final result. The principles of treatment of injuries suffered from automobile accidents do not differ from those of other causes. These injuries, however, present certain problems that might well be considered. Such injuries have in the past few years become the most frequent with which we have to deal. Veneable states that, the mortality and morbidity from automobile injuries approaches that of cancer and tuberculosis combined, and that it ranks second only to influenza as a cause of disability. These injuries have increased in spite of improvement in highways, traffic regulations and the introduction of many safety features by the automobile manufacturers.

There are certain peculiarities of these injuries: (1) They vary in degree of severity from one extreme to the other. (2) They are frequently multiple. (3) They may occur any where along the highway making delay in treatment and transportation to the nearest facilities important problems. (4) The wounds are often grossly contaminated. (5) Automobile accidents are the only cause for certain injuries such as bumper or fender fractures, steering-wheel head and chest injuries, door-handle and instrument panel injuries.

The variation in degree of severity of the wounds is impressive since most commonly the injury is merely a contusion or slight abrasion, however, the frequency of the other extreme is indicated by the almost 40 thousand fatalities annually in this country from such injuries. The possibility of multiple injuries should be always in consideration and a complete physical examination should always be made when the condition of the patient justifies it. Such a possibility must be particularly borne in mind in contusions of the chest or abdominal wall, which may appear quite insignificant while at the same time there may be serious injury to an underlying viscus.

The delay in treatment of these injuries from any cause may be a serious factor for several reasons. (1) In the event of hemorrhage it is of course imperative that it be quickly controlled. (2) Shock resulting from the injury is not only aggravated by the delay and the usual concomitant exposure, but not infrequently reaches an irreversible state and proves fatal regardless of the treatment. (3) While wounds properly treated early can be considered as clean wounds, however, if six or eight hours have elapsed since their occurrence they should be treated as infected wounds. (4) The delay in treating fractures is particularly undesirable since early reduction is accomplished with less difficulty and the end results are much better.

The transportation of the injured patient frequently presents a major problem. It is well to remember that the moving of an individual who has been severely injured and is in profound shock, may serve only to aggravate the condition. It is better to have a live patient lying on the ground at the site of the accident, than a fatality in one of our best equipped hospitals several miles away. However, when the condition of the patient justifies such transportation he should be removed to a hospital with adequate facilities for the proper care. The

*Read before the Jefferson County Medical Society.

thought foremost in our minds during the transportation should be, not to increase the trauma and to keep the patient warm and as comfortable as possible. The use of Thomas traction splints or their equivalent in cases of fractures of the extremities, during transportation and until the fracture is properly reduced, is most advisable. The transportation of an individual with a fractured spine should be done with the greatest care, since by careless moving of the patient the injury may be greatly increased.

SPECIAL CONSIDERATIONS

1. Control of Hemorrhage: This condition requires the most urgent attention. If it occurs from small vessels or veins it is best controlled by a sterile pressure dressing and elevation of the part. If one of the larger arteries of the extremities is severed a properly applied tourniquet should be used until the vessel can be identified, clamped and ligated. So often tourniquets are improperly applied and serve to increase the hemorrhage rather than control it. Primary shock is frequently a blessing in disguise in as much as it lowers the blood pressure and reduces hemorrhage. Consequently until hemorrhage is controlled, intravenous fluids and stimulants to raise the blood pressure should not be given. If the hemorrhage has been severe, a blood transfusion may be life saving. In the event of a large hemorrhage into one of the body cavities, if the blood can be recovered without gross contamination it should be strained through gauze, citrated and given intravenously.

2. Treatment of Shock: Primary shock should be treated by lowering the head, applying and retaining the body heat, and giving sufficient opiate to abolish pain. Secondary shock has been shown to be due principally to a low circulating blood volume and this may be from actual blood loss as in hemorrhage, or to a loss into the injured tissues. In either event an adequate circulating volume must be restored and this is best accomplished by transfusion in addition to the measures enumerated for primary shock. So often blood is difficult to obtain immediately and it is necessary to use a substitute. Gum acacia may be used since it affords a more prolonged restoration of circulating volume than saline or glucose solutions.

3. The Treatment of Wounds: These wounds are usually of a contused lacerated type and are frequently grossly contaminated with dirt and clothing. The care of clean lacerations ordinarily offers no difficulty, hence it is desirable to transform all wounds into that type. Immediately the wounds should

be covered with a sterile pressure dressing until the patient may be transferred to a hospital operating room preferably.

There, following adequate anesthesia, the wound should be gently explored and thoroughly cleansed with soap and sterile water. The crushed devitalized tissue should be carefully excised without sacrificing viable tissues, and the hemorrhage controlled with warm saline packs. As few subcutaneous sutures and ligatures should be used as necessary for hemostasis and accurate approximation of the parts, and those should be of the finest silk. The use of fine silk sutures and ligatures is followed by less tissue reaction and the incidence of infection is greatly diminished when compared with those wounds in which other types of suture material are used. The skin should be closed with fine interrupted silk or dermal sutures with careful approximation of the skin edges, in order to obtain healing with the least possible scar formation. The injured part should then be placed at rest and the dressing changed when necessary to remove the sutures.

The gross contamination of many of these wounds not only requires extreme care in mechanical cleansing, but these individuals should always receive adequate tetanus and gas bacilli antitoxin.

So often in wounds of the extremities there is laceration of the underlying structures such as the tendons and nerves. The proper repair of these structures requires the most meticulous care. If the case is seen before 6 to 8 hours have elapsed they may be repaired at once, however, if later the wound should be closed and allowed to heal, then, after two or three weeks perform a secondary operation for repair of the tendons and nerves. For the repair, whether primary or secondary, it is preferable to administer a general anesthetic and employ as strict surgical technique as for a major abdominal operation. The tendons are exposed with as little trauma as possible and the ends accurately approximated by the use of fine silk sutures. The nerve ends are approximated in a similar manner. Following the repair, the extremity is placed in a plaster splint in such a position as to relieve the severed structures of tension. This splint should be worn for three or four weeks—then gradually removed for active exercise and massage of the parts.

Chest Injuries: These vary in extent from minor contusions and fractures of one or more ribs to the severe crushing injuries which account for many deaths. These injuries are usually accompanied by a considerable degree of shock, but unless there is dyspnea or cyanosis the outlook may be fa-

vorable. Most of these are non-penetrating wounds, however, we occasionally see the penetrating type in which we have to treat an open pneumothorax or sucking wound. These open chest wounds should be considered potentially infected. In order to combat the ill effect of an open wound it should be covered with moist towels and adhesive strapping until the patient can be removed to an operating room where it should be debrided and closed. In the event of hemorrhage from an intercostal or internal mammary artery, ligation of the vessel will be necessary. In either the penetrating or non-penetrating wound there is frequently hemothorax or pneumothorax, or a combination of the two. A small or moderate hemothorax usually requires no special treatment. In the event of massive hemothorax it may become necessary to relieve the embarrassed respiration and circulation by aspiration. This blood may be strained and replaced intravenously. Following the aspiration it is well to replace with sufficient air to collapse the lung to facilitate cessation of the bleeding. Occasionally a tension pneumothorax is encountered as a result of a valve-like entrance of air into the pleural cavity, but not permitting its escape. Tension pneumothorax requires urgent tapping to relieve the increased intrapleural tension which may seriously displace the mediastinum. Subcutaneous emphysema is occasionally seen with chest injuries. It ordinarily causes no great trouble and demands no special treatment. The more unusual injuries, such as contusion of the heart and rupture of the diaphragm, should be kept in mind, however, their discussion does not fall within the scope of this paper.

Abdominal Injuries: These are usually non-penetrating in nature and require the utmost attention in order to recognize the serious intra-abdominal injury and carry out the appropriate treatment at the proper time. Most any of the intra-abdominal viscera may be involved, however, those usually injured in severe wounds are, (1) The liver, (2) The spleen, (3) The kidneys and bladder, (4) The intestinal tract, (5) The pancreas.

The diagnosis of such an injury depends on frequent examination and carefully watching for important signs. There is usually considerable shock and early this may be about all. Later there will develop increasing pain and perhaps localizing tenderness, or in the event of rupture of the liver or spleen, increasing evidence of intra-abdominal hemorrhage. The use of the X-ray is of great value in recognizing a rupture of the stomach or intestine, since the presence of a gas bubble underneath the diaphragm

is diagnostic. These patients should be catheterized early to determine the presence or absence of hematuria and to gain valuable evidence as to the condition of the bladder. If rupture of the stomach, intestine or bladder is recognized within the first few hours and repair is done, many lives will be saved. Rupture of the spleen will likewise require urgent abdominal exploration and usually splenectomy. Injuries involving the liver and kidneys are usually best treated more expectantly.

Head Injuries: Most of these consist of laceration of the scalp with perhaps mild concussion, and their treatment is that of other lacerations previously described. Because of the great vascularity of the scalp there is usually quite free bleeding which is best controlled by deeply placed sutures approximating the wound edges, followed by a pressure bandage dressing. Much time may be lost and little benefit gained by attempting to clamp and ligate the retracted bleeding vessels.

Many of the patients with head injuries can be spared great harm by placing them at absolute rest under careful clinical observation rather than disturbing them further with an X-ray examination, lumbar puncture or the administration of hypertonic solutions, all as valuable as they may be in later study and treatment of the injury. Our attention should be focused on the brain injury per se rather than the presence or absence of a skull fracture. There is little to be gained by a major surgical procedure within the first five or six hours, except in those cases of rupture of the middle meningeal artery with extradural hemorrhage. Dandy states, that if the patient is to die within that period there is nothing to do to prevent the outcome.

In the event of a depressed fracture of the skull, the fragment should be elevated as soon as the condition of the patient will permit.

CONCLUSIONS

The emergency treatment of automobile injuries should be based on the following fundamentals of treatment of fresh wounds: (1) Accurate hemostasis. (2) Mechanical cleanliness. (3) Aseptic and atraumatic care in the handling of the wound. (4) Careful excision of crushed devitalized tissue. (5) The use of as little foreign material as possible in repair of the wound. (6) Placing the injured part at rest so that uninterrupted healing may occur.

Serious injuries of the head, chest and abdomen require careful examination and ob-

servation in order to determine the presence of injuries that may demand urgent surgical repair.

Fractures of the extremities should be transported with the use of Thomas traction splints or their equivalent, to facilities for their early reduction and immobilization.

DISCUSSION

Charles M. Edelen: In reading Dr. Imes' paper and in attempting to emphasize just one portion of it, we thought it a good idea to show these types of splints which are used by the police department in town. Most of the police cars are equipped with them. This is the Thomas splint. These belong to Dr. Griswold. The approximate cost is nine or nine dollars and fifty cents. Most anyone in the county can equip himself with this type of splint. It is easy to apply and it is a revelation to watch them put on.

The other day I had a child who had been driven 190 miles with a small retentive dressing on for fracture of the humerus. There were fractures of both legs and both forearms and the child was in a severe state of shock. If we could just educate ourselves not to transport these patients before they do have some type of traction splint. I heard Straith, of Detroit, give a paper in Atlantic City on "Surgery of the Crossroads." I was rather struck by that term. Certainly it is on the highways that most of the accidents occur. They don't occur in Louisville.

Organized medicine throughout the state and county sponsor campaigns against tuberculosis, cancer and syphilis, but we have not done anything about first aid and care on the highway or to educate our country doctors how to take care of these cases before transporting them to town. Nothing is said of the enormous loss of life (39,500 in 1937) in traffic accidents. We leave the problem to the public officers alone. They are doing a good job of educating the public of the danger of speed and non-observance of traffic rules. We can learn something by observing their work in caring for a victim of a highway accident. Many patients with broken legs or arms are brought to the hospitals in Louisville from out in the county or state without proper traction splints. This is not true in Louisville in cases brought in by the police.

The slogan of the Fracture Committee of the College of Surgeons, "Splint 'em where they lie." is well worth remembering. Too often a well-wishing passer-by will assist in carrying a person with a fractured femur to a dry or shaded spot or aid him to attempt to stand only to have the well meant actions result in the

broken ends of bone churn and grind soft tissue structures between them or stick out through heretofore unbroken skin.

Accident victims only complain of what hurts them most. Only, as Dr. Imes has said, after a time is it that you find most serious thing that person is suffering from. I emphasize latent symptoms. These persons must be seen frequently for latent signs. As they come out of shock they will complain of other things. Doctors Barbour and Hamilton first utilized that. Dr. Bailey read a paper in which he brought out that point made by Barbour and Hamilton for determining the state of shock, used in St. Louis, either in the General or in the Barnes Hospital.

Pedestrians made up the majority of victims of traffic accidents. In occupants of automobiles, the more seriously injured are guest passengers riding to the right of the driver. They do not have a steering wheel to hold on to. Of the more serious facial injuries in guest passengers, 75 per cent occur in young women. Passengers in rear seats commonly have fracture of the atlas.

Dr. Imes mentioned the use of crash padding, counter sinking of knobs, door handles, etc. There are no more metal robe rails.

I went to the Traffic Bureau this afternoon. They are very willing to give you the information, they are a most cordial bunch, except when you go to traffic school. They gave me the following figures.

NATION

1 Traffic (motor vehicle) death every 13 minutes.

3 Traffic (motor vehicle) injuries every minute.

38,500 people killed, motor vehicles in 1936.

39,500 people killed, motor vehicles in 1937.

1,340,000 non fatal injuries in 1936.

1,360,000 non fatal injuries in 1937.

LOUISVILLE

1936 Comparative Statistics Show

Lost by traffic accidents, \$3,300,000.

Lost by crime, \$242,662.32.

Costs of Schools, (B. of E.) \$3,000,000.

Lost by fire, \$900,000.

Killed in Louisville last year, 36 and 31 were pedestrians.

Killed so far this year, 10 with 6 being pedestrians.

Killed this same time last year, 12 with 11 pedestrians.

Average age of drivers last year in Louisville, was 33.

In the 36 fatality accidents 34 of the cars were driven by men and two by women.

W. B. Troutman: Dr. Imes only mentioned

in passing one type of automobile injury in which I am interested, contusions of the heart. The advent of the automobile has brought us a type of heart disease which previously was hardly ever encountered, i. e. traumatic myocarditis or contusion of the heart. This is the steering-wheel type of injury with pressure on the mid-sternal area; naturally the driver is the one passenger in the car who is most likely to suffer this accident. Unfortunately, as Dr. Edelen just stated, many of these injuries may be latent in appearance and that applies to this type. The victim may feel quite well for several hours and then begin to develop a rapid heart failure leading to death, however many individuals may survive mild contusion to the heart and eventually fully recover. At autopsy we find a fresh bruise of the myocardium, this is differentiable from other heart pathology by the freshness of the lesion and the absence of other diseases such as occlusion of a coronary vessel and the lack of myocardial changes except at the site of injury.

George A. Hendon: Dr. Imes discussed a phase of the subject that has always been a question in my mind, that I have debated and I am afraid that I may be wrong in my conclusions. He spoke of intravenous fluids raising blood pressure and aiding hemorrhage. Intravenous fluid should never be given at a rate of more than 30 drops a minute. If the heart beat is 100 or slower that is only one drop of fluid to every three to five heart beats. There has been a question as to how much that one drop in this division will increase the blood pressure.

Ellis Allen, Jr.: Although this subject is entirely surgical, everyone of us should be responsible in automobile accidents. We can't pass by anyone lying in the road. The campaign should begin at home. Everyone of us should familiarize himself with the treatment of automobile injuries. Intra-abdominal injuries might be subcutaneous, with no gross evidence of injury on the outside. This organization should take some action toward spreading knowledge of the accepted treatment, the safest way to treat different kinds of injuries. Perhaps we could distribute some of the information in pamphlet form to the members.

R. Douglas Sanders: In the care of persons injured in automobile accidents it must be well remembered that those injuries requiring anesthesia will require some preparation of the patient for the anesthesia and for the operation; for the shock of anesthesia superimposed upon the shock of injuries may easily cause death or serious disability.

Such accident cases frequently have a full stomach and as the digestive processes stop by

reason of fright, pain or shock, the stomach may remain filled for many hours following the injury. So if the injured has eaten within four hours of the accident he should have the stomach pumped. The picture of patients drowning in their own vomitus is both unpleasant and too frequent. This hazard is often complicated by alcoholism as well, and as acute alcoholics are not particularly good surgical risks it is well to endeavor to arouse these individuals before surgery is contemplated.

Pre-operative medication has been shown to be a very great protective influence in surgery and few indeed are the emergencies that will be so acute as to warrant its deletion. Morphine and atropine may be given intravenously if the need for immediate operation is manifested, thus shortening the time to a few minutes that one must wait for the height of its respiratory depressing effect to be reached. This is to be avoided of course in suspected head injuries.

As for the choice of anesthesia, the lightest acting one consonant with the needs of the surgery to be performed is the one of choice; each case having as it does its separate set of limitations. Extensive injuries to the tendons of the wrist are perhaps better repaired under the effect of brachial block. For most other cases cyclopropane is excellent, ether and spinal being of less usefulness because of their tendency to increase already existing shock.

Austin Bloch: We are told that patients with compression fractures of the vertebral bodies should be transported in lordotic position; and that those with fractures of the bony arches should be in kyphotic posture, to avoid unnecessary cord damage.

I have never read an adequate exposition of the physical diagnosis of spinal fractures, as performed upon the highway, in cold weather. If Dr. Imes or some other surgeon present can enlighten me on this question, I shall be obliged.

Bernard Schneider: I should consider it a privilege to call to the attention of the society a volunteer first aid organization organized in 1910, and now composed of over a million boys and more than 280,000 adults: The Boy Scouts of America. This movement in its program teaches all the principles that Dr. Imes has outlined, including "Splint 'em where they lie." Through its Health and Safety Service the National Council of the Boy Scouts of America continues to teach its boys all the first aid principles that we should all like to see carried out in such cases as these. The men and boys, all volunteers, are taught that first aid is the emergency treatment given in cases of injury or illness before the doctor arrives and also the

immediate care of slight injuries. These boys are aged twelve up and are reviewed and examined constantly. Since its organization, over eight million boys have been taught first aid and although there are only a million boys actually engaged in Scouting today, the percentage among our population is increasing constantly. Many adults, who were Scouts during their boyhood, recall many of these principles, meet the crisis and put them into operation when the occasion demands.

Irvin Abell, Jr.: If there has been a traumatic injury, the possibility of intra-abdominal complication is always present. A young child was brought to the hospital shortly after a wheel of a Ford truck passed over his chest. There was absolutely no injury to the skin. The child recovered from the initial shock and was progressing smoothly when at the end of eight and one-half hours he suddenly collapsed from an acute intra-abdominal hemorrhage. At operation it was found that the left lobe of the liver had been completely broken off. The single case illustrates the three cardinal considerations which dictate the management of all traumatic cases.

1. That the magnitude and extent of the force applied externally is in no way related to the severity of the intra-abdominal injury.

2. That the evidence of the force applied externally is no measure of the intra-abdominal injury.

3. (a) That the physical findings which are present during the first few hours following the initial injury are not a measure of the intra-abdominal situation.

- (b) That physical examinations repeated during the first eight hours are required to definitely ascertain the intra-abdominal condition.

If the following facts are carefully noted when a patient is first seen a basis of comparison for future examinations is established. These important facts are: the presence or absence of nausea and vomiting, the presence of a tympanic area above the liver, the extent of the abdominal tenderness, the presence or absence of pelvic tenderness, whether or not fluid is free within the abdominal cavity, and finally whether or not the patient has voided. In addition to this, blood pressure and pulse should be recorded faithfully every fifteen minutes. I recommend particularly to your attention that these clinical symptoms and findings can all be gained with the assistance of nothing more complicated than a sphygmomanometer and stethoscope. If the patient's course is followed in this manner, he can be taken care of just as safely and satisfactorily at home as in a hospital bed.

There are no rules to assist one in determining whether or not a patient suffering from such

an injury should be moved to a hospital. The individual physician in each instance being fully aware of his responsibility must reach a decision. If the initial shock either remains the same or increases, it is safe to assume that intra-abdominal injury of some type is present. In my own opinion, if there is the slightest suspicion that such an injury is present the patient should be moved immediately to a hospital. By taking this precautionary measure the patient is placed in a position where if the crises should develop he is surrounded by all the available forces which may be mobilized and rushed to his assistance.

R. O. Joplin: I am sure this paper has been of interest to everyone here, since we all at some time may be confronted with these problems. There are certain responsibilities we, as doctors, owe the injured patient:

- (1) Preservation of life, by checking hemorrhage and treating shock.

- (2) Prevention of additional injury and complications by: (a) immediate and adequate splintings, (b) care in examining, handling and treating patient, (c) relieving pain and anxiety.

- (3) Careful examination, both general and local and continued observation to make a specific diagnosis and institute proper treatment.

- (4) Ascertain the mode of injury, this will frequently give a lead as to diagnosis.

- (5) Record in writing your findings and observations. We should always remember that a pair of forceps and scissors, plenty of soap, water and elbow grease are worth more than all the beautiful colored antiseptics on the market.

Charles K. Beck: So far there has been nothing said about eye, ear, nose and throat injuries. Dr. Imes omitted them. Yet the nose, often our most prominent feature, is frequently injured. Sometimes it is a very serious thing. The function is disturbed and the appearance is frequently permanently marred.

Some three or four years ago, I was asleep, when suddenly about 2:00 a. m. the light was turned on in my room. My son was standing there with a bloody nose. He told me that down in the parlor were three more boys in the same condition. They had broken noses acquired in an automobile accident. One was a patient of Dr. Walter Dean. I called him and we removed the boys to the hospital, where they were X-rayed and we set the noses. I am glad to add that my son was not driving.

Not only the nose, but the rest of the face may be injured. Several years ago I saw a man with his face "stirred" around. The malar bones were comminuted and driven back. The fractures involved the orbits. To this day one eye is lower than the other and he is unable to bring that eye to a focus at certain levels. I sug-

gested an operation, but he was getting along pretty well and refused.

Sometimes there are injuries to the eyes. They were more common before the days of the shatter-proof glass. I had one case where one eyeball was lacerated beyond repair. It was practically exenterated. There was also severe laceration of the upper lid. The lid was repaired but I had to remove the eye. She is wearing a glass eye. The other was cut through the cornea. We saved that, although cataract and a cyst of the iris have developed. We must not forget that these structures are very important. Important not only to life but also to the appearance of the patient. In these days we recognize that the appearance of the patient may sometimes mean almost as much as life itself.

Pat R. Imes, (in closing): I agree with Dr. Hendon's remarks in regard to the influence of intravenous fluid administration on the blood pressure. If it is given slowly, as Dr. Hendon recommends, there should be no appreciable effect on the blood pressure, if, however, it is given more rapidly there will be elevation and in the event of concealed hemorrhage, it will be increased, consequently rapid administration in the presence of active hemorrhage is to be deplored.

In regard to Dr. Bloch's question, I must say that I would be unable to determine just what portion of a vertebra had been fractured at the site of the accident. I think it is important to keep the patients with spinal injury in the recumbent position, and certainly not jack-knife them into the back seat of a car for transportation. Such flexion of the spine is apt to greatly increase the injury to the cord.

Relation of Lymphocytic Choriomeningitis to Acute Aseptic Meningitis.—Baird and Rivers present evidence (sixty-five cases) which indicates that not all cases of acute aseptic meningitis (Wallgren) are caused by the virus of lymphocytic choriomeningitis. The etiologic agent or agents responsible for the cases not so induced are not known. From the records of three patients with lymphocytic choriomeningitis it appears that certain cases of the disease, because of the extent of paralysis and sequels, do not satisfy the criteria laid down by Wallgren for the diagnosis of acute aseptic meningitis. It is difficult or impossible to differentiate by clinical means alone the cases of acute aseptic meningitis caused by the virus of lymphocytic choriomeningitis from those not produced by the agent; however, the spinal fluid cell counts in the cases studied tend to be higher in the former group than in the latter. Children and even infants are not infrequently attacked by the virus of lymphocytic choriomeningitis.

THE PATHOGENESIS OF ANEMIA A CLASSIFICATION OF THE ANEMIAS*

HAROLD GORDON, M. S., M. D.

Louisville

The classification of the anemias is not a simple matter. This is due chiefly to the fact that the etiology of many types of anemia is unknown. Any classification, therefore, is subject to change as additional knowledge of the mechanisms of the anemias is gained. However, several advantages accrue from the classification of disease entities and anemia is no exception to such a generalization. A well considered classification serves to review recent advances, emphasizes gaps in our knowledge and clarifies our conception of the pathogenesis and management of a disease.

Many classifications of anemia have been proposed during the past few years. None has received universal acceptance, yet all have certain features in common: abolition of the time-honored subdivision of anemia into "primary" and "secondary" forms; emphasis on the etiology and a nomenclature based primarily upon the altered morphology of the erythrocytes. The advantages of a grouping based upon etiology and objective hematologic data are too obvious to require enumeration.

Haden proposed six primary morphologic groups in which the erythrocytes of anemic patients may be placed. His morphologic groups may be represented as follows: Normocytic which includes normochromic and hypochromic.

Macrocytic includes Hyperchromic, Normochromic, and which includes Hypochromic. Microcytic and Hypochromic.

From the clinical standpoint he grouped the anemias into two divisions: (1) Those due to Increased Blood Loss and (2) Those due to Decreased Blood Formation. Sturgis stated that a great majority of the anemias are either macrocytic or microcytic. Wintrobe suggested four hematologic groups—Macrocytic, Normocytic, Simple Microcytic and Hypochromic Microcytic, based mainly, as is the classification of Sturgis, upon the mean corpuscular hemoglobin concentration. Kracke has pointed out that in anemia the erythrocytes may be altered as to number, hemoglobin content and size. Each of these three factors may be normal, decreased or increased so that a total of 27 mathematical combinations is possible. Actually, however, the size and hemoglobin content is

*Read before the Jefferson County Medical Society.

often correlated so that there are fewer types of anemia.

Castle and Minot offered a classification based upon etiology and the status of the bone marrow. They place the anemias in two large groups—1. due to blood loss or increased blood destruction in which the marrow is hyperactive and 2. due to decreased blood production with physiologically hypoactive marrow.

Vaughan based her classification upon the three essential mechanisms by which anemia may be produced:

1. The Dyshemopoietic anemias due to failure or abnormality of blood production.

2. The Post-hemorrhagic anemias due to blood loss.

3. The Hemolytic anemias due to increased blood destruction in vivo.

Britton & Whitby adopted a classification similar to that of Vaughan. They include sub-titles indicating the immediate causes, where known, and the principal morphologic changes produced in the erythrocytes.

No originality is offered for the following classification, which is an adaptation of the ones proposed by the several authors quoted above. It is based in part on etiology, in part on mechanisms and in part on altered erythrocyte morphology.

CLASSIFICATION

1. Anhemopoietic (A-regenerative) Anemias.

A. Idiopathic Aplastic Anemia.

B. Aplastic Anemia due to

1. Chemical Intoxication (benzol, lead, arsenic, etc.)

2. Physical Agents (x-ray, radium, radioactive substances)

3. Infections (tuberculosis, pyogenic infections)

4. Neoplastic Disease (Hodgkin's disease, leukemia, carcinomatosis of bone)

5. Metabolic (?) (diffuse osteosclerosis, myelosclerosis)

II. DYSHEMOPOIETIC (Deficiency) ANEMIAS

A. Macrocytic (usually Hyperchromic).

Due to insufficient production of the intrinsic principle of Castle, defective storage of the anti-anemic substance, or insufficient intake of the extrinsic (protein) factor.

1. Pernicious Anemia.

2. Tropical Sprue.

3. Gastric carcinoma, resection or fistula.

4. Idiopathic steatorrhea.

5. *Diphyllobothrium latum* infection.

6. Liver disease.

7. Pellagra.

8. Macrocytic anemia of pregnancy.

9. Macrocytic anemia of thyroid insufficiency.

B. Microcytic (hypochromic).

1. Disturbed Iron Metabolism.

a. Diminished iron intake or storage.
Hypochromic nutritional anemia of infants and females.

b. Increased demand for iron.
Hypochromic anemia of pregnancy, infants, intestinal hemorrhage and infections.

c. Inadequate iron absorption.
Idiopathic hypochromic anemia, hypochromic anemia of ulcerative colitis, chronic diarrhea.

C. Of Variable Morphology, usually hypochromic.

2. Deficiency of Vitamin C.

3. Deficiency of Thyroxin.

III. ANEMIAS DUE TO ABNORMAL BLOOD LOSS

A. Post-hemorrhagic Anemias.

1. Traumatic (acute or chronic hemorrhage.)

2. Abnormality of the blood (hemophilia, thrombocytopenic purpura.)

B. Hemolytic Anemias.

1. Parasitic (malaria, syphilis, B. Welchii, etc.)

2. Chemical (lead, saponin, phenylhydrazine).

3. "Intrinsic" (hemolytic anemia of Lederer, acholuric jaundice, sickle cell anemia, paroxysmal hemoglobinuria).

IV. ANEMIAS OF UNKNOWN MECHANISM—

(probably both anhemopoietic and dyshemopoietic)

1. Cooley's Anemia

2. Von Jaksch's Anemia.

3. Leuco-erythroblastic Anemias of Infants.

SUMMARY

A great majority of the anemias, probably 90 per cent or more, are dyshemopoietic (deficiency) anemias. The cause of a particular type of Anemia can usually be ascertained by two independent but correlated lines of investigation—clinical and hematologic. The response of the erythropoietic tissues to abnormal influences can be standardized and made the basis of a practical classification of the anemias. A classification based upon clinical and hematologic data is proposed. Such a classification is useful because it offers indications for the management of the anemias and serves as a review of recent progress in clinical and experimental hematology.

PRIMARY CARCINOMA OF THE GALL
BLADDER

IRVIN ABELL, JR., M. D.

Louisville

Although papillomas are being more frequently diagnosed and removed, benign tumors of the gall bladder remain surgical rarities while the malignant lesions continue to attract clinical interest. These, constituting about 5 per cent of all carcinomas, rank sixth in frequency of gastro-intestinal tract malignancy. At the Lahey Clinic primary carcinoma of the gall bladder has been encountered in 1.4 per cent and at the Mayo Clinic in 1.3 per cent of all operations performed for disease of the gall bladder and bile ducts. Since cholecystic disease occurs most frequently in women over 40, it is to be expected that carcinoma of the gall bladder should be found more frequently in women than in men; in the proportion of about 3 to 1 as reported by both clinics. In our series of 18 cases—all proven to be primary carcinomas by microscopic section—16 were females, the age range being 44 to 75 years and the average age 60 years.

In any discussion concerning carcinoma of the gall bladder the relationship between it and gallstones forms the axis about which other considerations revolve. The unusual interest in this association is due to the fact that gallstones are present in a large percentage of all cases and are generally conceded to be, because of the constant irritation, a factor in the causation of the new growth. The proportion of cases of cholelithiasis which develop cancer is estimated at from 4 to 18 per cent; and the number of cases of carcinoma found in the presence of stones ranges from 69 to 100 per cent. In our series stones were present in each instance. That gallstones are not the direct and only cause of the carcinoma is evident when one reviews the relatively low percentage of cholelithiasis cases developing malignancies and especially when one considers the many cases in which the gall bladder has contracted down during a period of years upon stones without proliferative histologic changes occurring in the mucosa.

That the stones are formed secondary to the malignancy is a concept presented by some investigators. They hold that in the presence of obstruction with biliary stasis fragmented tumor cells act as a nidus for the development of calculi. If this theory were correct, all such gall bladders should be

found at operation to be greatly distended, containing but few stones. Contrary to this, in our cases the gall bladder wall was firm and thickened, the calculi multiple, and any enlargement of the organ was due to the malignant growth. In addition to this finding while the regions subjected to greatest irritation by stones are the fundus, neck, and cystic duct, there was no obstruction to the biliary flow in the 4 instances where the tumor could be removed by doing a cholecystectomy. The tumor was located in or near the fundus in each case, being removed in two without its presence being suspected. As has already been stated, each gall bladder contained multiple calculi. And finally in cases of carcinoma situated in the head of the pancreas which produce obstruction and biliary stasis stones would be expected frequently if this concept is sound. In 28 patients, all deeply jaundiced, proved to have carcinoma in the head of the pancreas only 9 were found to have stones.

The symptoms of cancer in the gall bladder fall into three groups; one, those due to the pre-existing cholecystitis and cholelithiasis; two, those due to the local effects of the tumor; and three, those due to extensions and metastasis.

Since roentgenological visualization of the gall bladder does not permit the early recognition of malignancy, its clinical diagnosis depends entirely upon symptoms produced by local effects of the tumor, extension, and metastasis. A palpable mass in the right upper quadrant associated with either jaundice, or severe anemia, or cachexia may lead to a diagnosis of malignancy. It must be appreciated that jaundice develops only after obstruction of the common duct either by direct extension or by metastasis to regional lymph nodes, as occurred in 3 cases; that severe anemias are seen only late in the disease, there being a count below 4 million in only 3 cases; and that some weight loss is to be expected in any individual who suffers from gall bladder disease over a period of months, cachexia indicating a terminal state. The nature of the palpable mass may be the determining factor in the diagnosis. If it is smooth and rounded, in the presence of jaundice malignancy of the pancreas is suspected. On this point 18 of our 28 carcinomas in the head of the pancreas were recognized. If the mass is hard, irregular, and non-tender, either the correct diagnosis or that of carcinoma of the liver is suggested. Direct extension into the liver was present in 9 cases. And finally, if the mass is indefinite, with the clinical history of gall bladder dia-

ease, a diagnosis of cholelithiasis results. In any case it is instantly appreciated that the lesion producing such a palpable mass is not amenable to surgical treatment.

It is absolutely impossible to differentiate carcinoma of the gall bladder while it is in a curable stage from chronic cholecystitis and cholelithiasis. Of our 18 cases two were preoperatively diagnosed as carcinoma of the pancreas and one carcinoma of the liver. The remaining 15 were operated on, 5 with a diagnosis of chronic cholecystitis and 10 with a diagnosis of chronic cholecystitis with cholelithiasis. A history of indigestion dating from two months to twenty years was present in all cases. In 10 the development of right upper quadrant tenderness and in 4 the occurrence of colic brought the patient to operation. Twelve reported some weight loss and 4 were jaundiced. Persistent nausea was present in one case where pyloric obstruction had been produced by direct extension. Two patients who had undergone 21 and 30 years before a cholecystostomy performed for gall stones complained of the reappearance of their indigestion. As can be readily seen, these symptoms and findings do neither establish nor even suggest the correct diagnosis.

As regards the surgical treatment, we believe that an exploratory procedure is indicated in all cases unless a definite diagnosis of carcinoma of the gall bladder can be made. From what has already been presented it is obvious that such a diagnosis rests upon far advanced disease. Of our 18 cases because of the extent of the new growth 9 were merely explored, a fact which further emphasizes the difficulty of clinical diagnosis since 6 of these were diagnosed as chronic cholecystitis with stones, the inoperable malignancy not even being suspected. A posterior gastro-enterostomy was performed to relieve the one case of pyloric obstruction. In 4 instances where there was direct extension into the liver cholecystostomies were performed. In 3 instances cholecystectomies were done, the carcinoma not being recognized in 1 case. And finally in one instance a cholecystostomy was done for an acute cholecystitis complicated by empyema. Five months later the gall bladder was removed and the carcinoma discovered during the routine pathological examination. It is important to recognize that an ulcerating, malignant lesion may initiate an empyema and that a carcinoma may develop in a gall bladder even years after cholecystostomy.

In view of this hopeless outlook of carcinoma of the gall bladder due to the impos-

sibility of early recognition and in view of the relationship between carcinoma and cholelithiasis the question arises whether or not cholecystectomy to escape the occurrence of carcinoma is indicated in every person proven to have gall stones. While no single rule can be followed in every case, our present feeling concerning cholelithiasis is that early removal is indicated. Even a symptomless single cholesterol stone may in time start the vicious march of cholecystitis, cholangitis, hepatitis, and pancreatitis. Furthermore, stones create the ever present danger of obstruction in the cystic and common ducts with such formidable complications as gangrene, empyema, perforation, and acute pancreatitis. The longer the stones are present, the greater is the damage to the biliary system; and the older the patient, the graver are the dangers with a tremendous rise in the risk when complications occur. It is but rarely that symptomless stones will be identified, for the simple reason that there must be some indication for examination of the stomach, duodenum, and gall bladder. And so, those cases of cholelithiasis in which carcinoma is to be feared usually suffer sufficient distress to indicate cholecystectomy. In estimating the risk of cholecystectomy to a patient older than 50 one must include with their evaluation of the cardio-renal and hepatic systems the definite danger that seven patients out of every one hundred suffering from gall stones may be expected to develop carcinoma.

SUMMARY

1. A series of 18 primary carcinomas of the gall bladder, each associated with stones, is presented.
2. The relationship between carcinomas and stones is discussed.
3. The impossibility of making a clinical diagnosis during the operable state is stressed and the fact that successful removals have resulted from a preoperative diagnosis of cholecystitis and cholelithiasis is recorded.
4. The development of a malignancy 21 years and 30 years after cholecystostomy is reported.
5. The advisability of early operation for gall stones, particularly when the patient is in the cancer age, is urged.

"These, gentlemen," said Dr. Oliver Wendell Holmes in a lecture referring to the lower portion of the pelvic bone, "are the tuberosities of the ischia, on which man is designed to sit and survey the works of creation."

MULTIPLE ABSCESS OF THE LIVER*

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Incidence and Etiology: I was very much surprised to learn by reading the literature that multiple abscess of the liver is more common than the solitary. The mortality as everyone knows, is extremely high, 95 per cent. Some authors report it as invariably fatal. Shuman, in *Western Medicine*, January 36, p. 44, gives three types, classified according to the paths of infection, viz., suppurative cholangitis, general septicemia, and pyemia suppurative phlebitis. Keefer in the *New England Journal of Medicine* Vol. 211, No. 1, p. 21, reviewed 85 cases, reported from the Boston City Hospital, as follows: From the basic radicles of the portal vein, 19 cases. Primary lesions in the portal area, 22 cases. Direct extensions into the liver substance, 11 cases. Extension through the biliary passages, 13 cases. Metastatic generalized sepsis, 11 cases. Miscellaneous, 9 cases. Abscess of the liver caused by *Bacteroides Infunduliformis* is reported in the *Archives of Pathology*, Vol. 17, two cases by Beaver, Henthorn and Macy. The effort here seems to show a specific action exerted by the *Infunduliformis*, of which 17 species are listed.

Results of Bacteriological examination of 32-cases reported by Keefer, *Bacillus Coli* 13; *Streptococcus Hemolyticus*, 7; *Staphylococcus Aureus*, 9; *Bacillus Proteus*, 1; *Entameba Histolyticus*, 9; *Actinomyces*, 1; *Tuberculosis*, 1; *Pneumococcus*, 1; *Streptothrix*, 1; *Bacillus Typhosus*, 2.

Complications, Keefer reports, Lung abscess, 7; Peritonitis, 7; Subdiaphragmatic abscess, 5; Pleural Empyema, 2; Pelvic Peritonitis, 3; Pulmonary Infarct, 1; Brain Abscess, 3; Hypothorax, 2; Transverse Colon Fistula, 2; Perforation of the Stomach, 1; Pericarditis, 2; Endocarditis, 1; Amyloid disease, 1; The conclusion is therefore reached that while the resistance of liver tissue is very great, still it is finally susceptible if the agents are either numerous or very virulent, or if other circumstances favorable to suppuration are present and active.

Pathology: Minute disseminated abscess must be considered. It is frequently a complication of infective processes in the organs adjacent to or connected with the vascular or biliary routes, more particularly in the parts of the intestine drained by the portal vein. The liver acting as a filter for the system can easily collect residue from

the circulation enough to establish a focus of infection. Cholecystitis is due to a pyogenic infection that is providentially retained within the sheaths of the ducts of the gall bladder. The peritoneum evidently offers less resistance to pyogenic invasion than liver structure does and the organisms traveling in the direction of least resistance involve the peritoneum more readily than the liver. Hence patients affected by cholecystitis or cholangitis die of peritonitis more often than by involvement of the liver structure. It is interesting to note how these infections occur. In Keefer's series they occurred in the ratio of 50 per cent as a complication of appendicitis. The other cases were from areas that were adjacent either by continuity or contiguity or as a result of generalization and some occurred by encroachment from infection in nearby organs and some were primary and resulted from trauma of the liver itself.

The pathological picture is one resembling a miliary tuberculosis. The affected organ appears to have been shot through with fine bird shot, each shot representing a minute abscess, varying in size from a pin point to a peanut. Some of the larger ones show that they have been formed by coalescence. The small abscesses by the crumbling of their walls are converted into a larger size. In cholangitis and pylophlebitis they may be traced along the route of the biliary ducts and vascular radicles. In a generalized septicemia, the liver tissue is involved as a participant in this systemic disaster although showing greater resistance than the othersoft structures of the body. The liver is unique in that it has a double vascular circulation. The portal vein and hepatic artery, hence agents of infection, can be borne into its cellular arrangement by two currents, out by one, besides being the filter for the intestinal blood. It therefore, possesses some form of immunity against pyogenic infection, or with such abundant opportunities thus afforded, the prospects of infections would be bound to prevail at every case of exposure.

Symptoms: The symptoms of liver abscess, whether simple or multiple, are those commonly seen in any septic infection with fever, namely, occasional or frequent chills and sweating, malaise, loss of weight, prostration, leucocytosis. Accompanying these phenomena are localized signs or symptoms of liver disease or one of its complications. Prominent ones are hepatic enlargement, deep-seated pain in the hypochondrium, elevation of the diaphragm, unilateral or bilateral friction rubs over the liver, jaundice, pain

*Read, before the Jefferson County Medical Society.

over the shoulder, signs of localized or generalized peritonitis, pleural empyema or lung abscess. The source of infection may be from any area drained by the portal vein. In more than fifty-per cent, that area is in the appendix. Frequent sources are piles and other rectal ills. In over-whelming cases, leucocytosis is absent.

Treatment: It is understood that the usual routine treatment including the ordinary rules of hygiene and nutrition will be observed, symptoms that are obvious will be appropriately met when possible. This paper is written for the chief purpose of promoting two forms of treatment that are synergistic to each other.

The first of these concerns negative pressure exerted upon the kidneys, which in my hands has proven the most important treatment in a wide variety of cases of infection by destroying and eliminating the products of sepsis. The scheme briefly described consists in forming a vacuum in the bladder which, in its turn, is transferred up the ureters to the pelves of the kidneys and there it acts upon the kidneys as if they were Berkfeld filters. I have found that the simplest way to produce a bladder vacuum is by the suction apparatus here illustrated. By the illustration, one can get a better idea of its construction than by a graphic description. The instrument as it is made will allow for a maximum negative pressure of 6.5 centimeters of mercury which appears to suffice in all cases. This pressure can be increased or diminished, by raising or lowering the main reservoir. If it is too strong, the negative pressure will collapse the organ upon which it is used and thereby defeat its own purpose. If not enough power is exerted it will prove ineffectual. It not only removes the products called polypeptides of which creatinin is a good example. There can be no danger of dehydrating the patient because of the establishment of a compensatory thirst which serves to preserve the fluid balance in the body. This process not only removes but dilutes the noxious substances wherever they may exist, in the blood stream, in the lymph stream or the lymph spaces, and by diluting them facilitates their elimination. Thus, if the patient eliminates a gallon of urine a day, each quart will contain just one fourth as much organic matter in solution as if he only eliminated one quart. No proof is required to establish the fact that dilution and attenuation are synonymous.

The following list of clinical cases is appended to give you an idea of the wide range of usefulness that has been proven:

Strangulated hernia operated	1
Essential hypertension	1
Pyelitis	4
Prostatic retention	4
Cardio-renal edema	2
Septicemia	3
Inoperable cancer, stomach	1
Pre-Eclampsia	1
	—
	17

Intravenous Glucose: This will cover diseases known as "liver deaths", a form of necrosis of the liver cells without suppuration. These cells are in varying degrees of decomposition, some partial, some complete, according to the degrees of involvement. It is their function that suffers more than their structure. If the function can be vicariously assumed by other resources the crippled cells will be allowed an opportunity to recuperate by the relief thus furnished. There is nothing that offers much relief as the assumption of the normal function, by artificial or natural resources. The three R's, Rest, Relaxation, and Repose, are now and always will be the solid basis of all therapy. Glucose by its judicious administration intravenously is known to perform certain functions that belong to the liver. It has been shown by Mann and his coworkers that the liver may be removed from a dog and the animal will survive if sufficient glucose is intravenously administered. If the liver is diseased, glucose in the vein will assume some of the functions, if not all, and thereby allow sufficient rest for restoration, if restoration is within the range of human possibility. In administering glucose, certain details are important. The rate should be carefully watched and should never exceed 30 drops per minute, or one cc of 10 per cent solution per pound of body weight per hour. A cannula with side openings should be used and the flow should be continuous and uninterrupted for at least a week.

While the liver is thus being relieved of its normal labors, or at least partially so by the dextrose solution, the polypeptides that are in the blood stream are diluted by the increased volume of fluid. The toxins in attenuated solution are rapidly evacuated by the suction on the kidneys.

It is a surgical axiom that toxins that cannot be combatted may be diluted and as all toxins are soluble in water, then the larger the volume of water that goes through the circulation, the greater is the dilution. Persons who have not given the matter more than a transient thought argue about "water logging" or dehydration of the system. But

there can be no danger of either one. If the water moves in as rapidly as it moves out, and moves out as rapidly as it moves in, there can be no possibility of either of these catastrophies occurring. This is well shown by the experiences which I have recorded. On the contrary, a patient with his lymph spaces filled with fluid from any source, suffering from anasarca or general edema of the most pronounced type can be relieved in a very few days by this plan, or one as dry as a cinder can have their normal moisture restored by the same process.

I beg to report the following cases:

Case Report: Mrs. Anna O. Married, age 59 years. Admitted to the Hospital October 30, 1936. Predominating symptoms: Pain distributed over the right upper quadrant of the abdomen, chills and fever; nauseated.

On October 23, patient became ill with chill and high fever and pain in right upper quadrant, most painful on respiration. On Saturday before entering hospital, patient had chills accompanied by fever. A doctor was called on Saturday. More chills on Sunday. Patient became very weak. Nose and lips covered with herpes. Sunday, patient continued to have chills and fever, but lighter and not more than once or twice a day. Appetite failed. Had tooth pulled while acutely infected seven or eight weeks before she was taken sick. Patient poorly nourished with light icterus. Very much dehydrated. Tongue dry and cracked and brown-coated. Heart sounds of fair quality. Systolic murmur at apex. Slightly enlarged to left of apex.

Abdominal muscles very rigid. No masses felt. Very sensitive over liver region. Skin and cornea bile stained. Right lobe of liver extended below costal margin and left over stomach.

Urine: Acid; albumin trace; sugar; acetone; diacetic acid. Bile: Indican trace; pus cells, 40 or 50 per high power field and many clumps, occasionally a granular cast; bacteria, 4 or 5 per high power field. Kidney cells and bacteria many.

Blood: 64 per cent Sahli, Haemoglobin: reds 3,400,000; whites 16,800; basophiles 1 per cent; myelocytes 3 per cent; Staff 20 per cent; Segmented 69 per cent; polys 92, lymphocytes 6, monocytes 1 per cent.

Icterus index 11. Blood culture shows gram plus after 18 hours. Patient was very weak and faint on admission, in great pain. Was unable to drink water or take any nourishment. She was put upon venoclysis of 10 per cent glucose solution in which was included two grams per litre of calcium gluconate and encouraged to drink all the water

possible. The suction apparatus was employed by introducing a Pezzer catheter in the bladder and attaching the pump shown in the illustration. The first day, her intake of fluids was 1660 cc and output was 1700 cc. The venoclysis was continued five days, and at the end of that time she could retain food and water sufficient to sustain her. The retention catheter and suction was continued from October 30 to November 20, twenty-one days. During that time the intake of fluids was 57,752 cc, and the output was 59,300 cc. Positive differential of 1,548 cc or 14 gallons 3 quarts, 8 oz. output and 14 gallons, 1 quart, 1 pint and 3 oz. intake, a positive differential of 2.6%. After removal of the catheter in the 30 days that followed, the intake was 85,785 cc. The output was 83,100 cc, the negative differential was 2,685 cc, or 6.6 per cent negative. 21 gallons, and 1 pint intake, and 20 gallons, 1 pint, 8 oz. output. This was the 30 days in the hospital after the catheter had been removed. Positive differential refers to instances in which the output is greater than the intake. Negative to instances in which the intake is greater than the output. Immediately after beginning treatment, the temperature declined from 103 degrees to normal in three weeks. Pus in the urine which could be arbitrarily represented by ++ declined to an occasional cell in 15 days. White blood cells from 16,900 to 8,050 in 20 days. The staffs from 20 to 3 per cent in 20 days. On the second day, there was a staph albus in the blood culture which was sterile on the 11th day. The N. P. N. was 54.5 on the second day, 45 on the 5th, 30 on the 10th, 31.5 on the 15th.

Blood urea was 42.8 on the second day, 30.3 on the fifth, 26.7 on the fifteenth. Creatinin was 1.4 on the second day, .9 on the tenth, and 1.2 on the fifteenth. Icterus index was 11 when we started, was 8 on the fifth, 4 on the tenth, 5 on the fifteenth. She left the hospital with a red cell count of 3,370,000. Haemoglobin 60 per cent, whites 7,050, Staff 3 per cent, Polys 61 per cent. She had liver extract at appropriate intervals during her confinement in the hospital.

She was discharged from the hospital apparently recovered and has remained well up to the present time. She is listed as a case of multiple abscess of the liver because every symptom necessary to establish a diagnosis was present except the microscopic tissue report. This, on account of the favorable termination, we were unable to obtain.

It is apparent that Sulfanilamide in its

various phases and combinations takes care of Micro-organism invasions but it is believed that the nitrogenous products represented by the polypeptides are an important factor in every infectious process, and can be eliminated in the manner mentioned. Also the nitrogenous accumulations of body waste as illustrated by N. P. N. Creatine urea-nitrogen are subject to the same method of elimination.

DISCUSSION

David S. Traub: Multiple abscess of the liver, as Dr. Hendon has so well pointed out, occurs with sufficient frequency to constitute a major therapeutic problem. I have seen only two such cases myself, but even this little experience has taught me the difficulties of diagnosis and their almost hopeless outlook. As has been pointed out this evening, only in one of his cases was the diagnosis established. But this cannot detract from the interest which should ensue from the two forms of therapy which he has so aptly devised and designated as synergistic. Although Dr. Hendon has applied these procedures with apparent success in many other conditions, it seems to me that in no disease can they be more applicable than in this. Certainly those of us who have been confronted with liver problems, will quickly grasp the basic and practical logic entailed in these procedures.

The first of these, that of venoclysis of dilute glucose solutions, rests on such sure ground, both as to its practicability in suitable cases and as to its value in all forms of acute and chronic liver disease that no informed person will question it. It must be remembered that one of the first functions of the liver to fail in all inflammatory hepatic diseases, is that of glycogenesis, and that perhaps the best way of promoting glycogenesis is by the induction of artificial hyperglycemia. Whether or not this may be still further augmented by the simultaneous use of insulin is doubtful but open to question (Allen; Cori). The vast protective value exerted by glucose on the liver is now common knowledge. Because of the diffuse and rapidly encroaching nature of multiple abscesses, this type of treatment is especially desirable. That experimental animals can survive the effects of hepatogenic toxins such as chloroform and carbon tetrachloride in amounts far exceeding the usual toxic dose, when the liver has been protected with glucose has been demonstrated by Bollman, Mann, and others. Clinically these salubrious effects are even more easily demonstrable. It must be remembered that even high grades of hepatic damage are capable of reversal if intensive treatment is instituted. In this connection I should like to call your attention to an unpublished case of proven cirrhosis of

the liver with recovery following the daily injection of glucose for a period of seven months. This case is described by Snell of the Mayo Clinic.

The second procedure, that of negative pressure applied to the renal apparatus, is essentially new. Most certainly it presents attractive possibilities as to treatment and opens up a wide field for future investigations both therapeutically and physiologically. With these problems Dr. Hendon has already concerned himself. Although I do not feel able to envisage all of the problems which negative pressure applied in this way entails, it appears that promotion of diuresis by this means rather closely mimics normal physiology. It is well known that an excessively burdened kidney both in health and disease carries on its work both by secreting larger quantity of water containing a smaller concentration of solutes or, if you will, by "working overtime." That the accumulation of toxic substances becomes excessive in all liver diseases is easy to appreciate, when one takes into account that not only are the detoxifying functions of the liver seriously impaired, but that the disintegration products of liver destruction are in themselves highly toxic. This failure is easily demonstrated by the inability of the liver in these conditions to conjugate artificially administered benzoic acid with glycine to form hippuric acid. The occurrence of "liver shock" or the so-called "hepato-renal syndrome" which is a state of severe toxemia often accompanied by renal failure, should call to our attention the close relationship between hepatic and renal functions. That the renal failure is due to the failure of detoxifying liver function with the consequent effect on the kidney, has not been proven, but it remains an attractive hypothesis. Indeed if this be true all attempts to dilute these toxins and to promote their elimination by a combination of procedures such as Dr. Hendon has suggested, would be highly useful. Whether or not it is possible to increase the elimination of these toxic substances by the application of negative pressure must yet be studied. That the water excretion itself may be enhanced by this means has been demonstrated by Dr. Hendon. I should like to caution against one danger in particular. I refer to the fact that serum chloride concentration is often reduced in hepatic failure and that the forced diuresis may still further impair it. Therefore it would seem wise to protect against this possibility by maintaining the chloride balance.

We are indeed privileged to have had the opportunity to hear such an original presentation from one of our own rank, and I wish to express my own appreciation of it and for the opportunity to discuss it.

Bernard Schneider: When the bladder has been decompressed for such a long time, what procedure is employed to reestablish the function of the bladder?

George A. Hendon, (in closing): There were two factors that had a rather deterring influence to what I had to say and encouraged me to say as little as I could about venoclysis because that has been a subject of a considerable amount of digression which nobody minds, but on occasions like this there is no time for an argument. I did not have time to go into this as thoroughly as I might have. I might have brought to your attention a fact that you already know, that if you have an organ that is disabled, if you can perform the function of that organ vicariously and give it a chance by resting, then you are getting down to the natural basis of all therapy. Now, by using this intravenous feeding we relieve the liver of some of its special functions and give it a chance to rest. You can remove a dog's liver and make him live a long time if you give enough glucose. If the liver is only partly disabled it can recover with a great deal more rapidity.

There may be some question about the amount of water removed. We have made it a subject of careful thought and investigation. We have done this repeatedly and we certainly do get these amounts. One case drank a gallon a day and eliminated almost a gallon a day for 18 days. In cases like that we have to put a pitcher of water beside the bed because the patients drink water continuously. If you put a large amount of water through the circulation, you wash it and dilute the toxins including the polypeptides, which the sulphanilamides do not affect.

I want to leave this thought with you that a person under ordinary circumstances, as shown by McLeod will retain 1-3 of the water he drinks. Of 1500 c. c. he will eliminate 1000 c. c. and hold 500 c. c. or 33 1-3 per cent. This percentage was reduced by the means advocated to less than 6 per cent in a group of 12 cases.

In reply to Dr. Schneider's question, none is required.

Action of Arsphenamine Preparations on Fetus

—Vámos and Böhm studied the action of arsphenamine on the fetus following administration to the mother. They conclude that arsphenamine can be demonstrated in the organs of the pregnant organism, in the decidual vessels and in the intervillous spaces, but not in the chorion or in the fetal organs. Since the independent defense of the fetus against a syphilitic infection is inadequate as the result of the impermeability of the chorion, it is important that energetic treatment is begun before or at the beginning of the pregnancy.

SULFANILAMIDE, ITS EFFECT ON THE EYE, EAR, NOSE AND THROAT*

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Without a doubt, the development of Sulfanilamide and allied substances constitutes one of the major achievements of modern therapeutics. Research workers have been stimulated to carry on more intensive effort to prepare even better compounds. The future may, and probably will, elevate chemotherapy to new heights in our struggle against bacterial infections.

The two compounds used by me have been Sulfanilamide paraaminobenzenesulfonamide and neoprontosil or prontosil soluble disodium-4 sulfamidophenyl-2' azo-7' acetyl amino-1', hydroxynaphthalene-3', 6' disulfonate. Sulfanilamide is soluble in water up to about 1 per cent. and neoprontosil up to about 2.5 per cent. Sulfapyridine was not sufficiently available to be incorporated in this paper, although I have been informed of its value in pneumococcus, type III infection. Many related compounds have been investigated, but the above drugs have been found best from the stand-point of therapeutic effect, and freedom from toxicity.

That Sulfanilamide is formed from neoprontosil in the body has been established by Calebroke, and Kenny, Bliss and Long. Fuller also isolated Sulfanilamide from the urine of patients treated with neoprontosil.

Extensive experimental evidence points rather definitely to the fact that Sulfanilamide owes its effectiveness to its inhibitory action on bacterial activity, thus protecting accumulated leucocytes, and allowing the natural accumulation of defensive macrophages. Osgood and Brownlee think that the best hemolytic toxins are neutralized, and the rate of division of the organisms decreased by the presence of Sulfanilamide. In an article entitled "The Leucocyte Response to Sulfanilamide Therapy", Bigler, Clifton, and Werner based their findings on a dosage of 15 grains per twenty pounds body weight. Where a leucocytosis existed, there was a decrease in the white cells as a rule, not later than thirty six hours following clinical improvement, although rarely forty eight hours after clinical improvement. In some cases, the leucocytosis did not change. In long drawn out infections, the leucocytosis could not be diminished. A leucopenia usually resulted in patients with a normal white cell count upon treatment with Sulfanilamide. The investi-

*Read before the Jefferson County Medical Society.

gators felt certain that Sulfanilamide caused a depression of leucocytes, due to their rapid fall at the end of an infection, frequently followed by a moderate increase in leucocytes after the drug had been discontinued. They noted little effect on hemoglobin content of the blood, or red cell count.

My experience has agreed in part, at least, with their findings.

D. C. Male, white, age 49, had progressed nicely following an incision of the left drum, for an acute purulent otitis, for about two weeks. The culture had shown hemolytic streptococci. He had been upon 30 grains of Sulfanilamide daily. However, one morning he became tender over the mastoid antrum, and complained of headache on that side. Another paracentesis failed to relieve him. His leucocyte count was 9,600, red blood cells, 3,900,000, hemoglobin, 85 per cent.

He was hospitalized and given 90 grains of Sulfanilamide daily. On the third day the count was: red blood cells, 3,640,000; hemoglobin, 68 per cent; white blood cells, 4,800.

Sulfanilamide was discontinued after the third day. Another complete blood count taken two days later showed red blood cells, 3,810,000, hemoglobin, 76 per cent and white blood cells, 5,450.

Final blood count four days later was red blood cells, 4,000,000, hemoglobin, 89 per cent, white blood cells, 5,050.

This case definitely illustrates the leucopenia as result of Sulfanilamide dosage, and rise in the white cells when the drug was discontinued. The red cells and hemoglobin were considerably reduced in spite of large daily doses of Jeculin.

Expressed in terms of water units, Sulfanilamide is nearly equally distributed in all tissues of the body, with the exception of bone and fat, the concentration being only slightly lower than that of the blood. It is almost completely absorbed from the intestinal tract in four hours, when administered by mouth.

A rather simple laboratory method for the determination of Sulfanilamide concentration in the blood is in common use in most hospitals, a purplish red azodye being produced, which can be compared with a standard in the colorimeter.

Death following the use of Sulfanilamide has been frequently reported in the literature. Weakness, anorexia, nausea, cyanosis, acidosis, dizziness, skin eruptions, and even fever are often mentioned. A case of toxic neuritis was discovered by Buey of Chicago. It can thus be seen that like trinitrotoluene, Sulfanilamide is a fearful, as well as a won-

derful discovery. Its promiscuous use in diseases for which it has no proven value, should be condemned. The most frequent complaints encountered in my practice have been weakness, dizziness, nausea, anorexia, and shortness of breath. Objectively—cyanosis, diarrhea, and acute prostration have been noted. A maculopapular eruption has occurred occasionally. In no case has a sulphate or other laxative been given any of my patients, during the period of Sulfanilamide treatments. It has been my practice to always combine some form of alkali with the drug, thus lessening the likelihood of acidosis, which caused many of the early reactions. There will be some few individuals who are definitely allergic to the drug, and most of the more recent severe reactions can probably be placed under this head. If Sulfanilamide is to be given in large doses, the patient should be under close observation, with frequent blood counts, and completely at rest. I have never noted hyperpyrexia or jaundice which I felt attributable to the drug.

Experimentally, it has been shown that the maximum therapeusis cannot be expected for forty eight hours after Sulfanilamide treatment has been instituted. This illustrates how important it is to begin the drug as soon as a definite need for it presents itself. In the acutely ill patient, it is wise to produce the optimum blood concentration as soon as possible. This varies according to various authorities from ten to thirteen mgs. per hundred cubic centimeters of blood. This concentration should be maintained until it is felt clinically that the intensity of the infection is definitely abating. I have in general applied the ratio of 15 grains for every twenty pounds of body weight in 24 hours, regardless of poundage and age. This has been checked against Sulfanilamide blood concentration, and the dosage gauged accordingly. This procedure has been followed in impending mastoiditis with associated severe constitutional symptoms and nose and throat infection with marked toxemia. After the proper blood saturation has been reached, the drug is given every few hours, as it seems to be completely absorbed from the gastrointestinal tract at the end of that time. The usual unit is five grains, frequently combined with soda. Commonly oral dosage is entirely satisfactory. However, when nausea exists or other conditions deter, it is given in an 8 per cent to 1 per cent saline solution subcutaneously. The usual neoprontosil concentration is 2.5 per cent.

In milder infections, the dosage may be considerably reduced. An individual at

bed rest can tolerate more of the drug than an ambulatory patient. In an adult treated in the office, without temperature, it has been my custom to give an initial daily dose of 40 grains neoprontosil. If the improvement is definite and immediate, the dose may be maintained. If not, the neoprontosil may be increased to 50 or 60 grains per day. Should the infection seem to be progressing in spite of adequate local treatment, the patient is put to bed, and Sulfanilamide therapy in ample dosage given.

In spite of claims made by the manufacturers, I am convinced that the value of neoprontosil lies alone in the amount of Sulfanilamide it is able to liberate in the blood stream. As 2.5 grams liberate only 11 grains of Sulfanilamide, we can see that in severely ill cases, it is wise to go to the basic substance itself. However, neoprontosil is definitely less toxic than the straight Sulfanilamide, and therefore lends itself much better to the role of office drug. It frequently controls mild infections sufficiently to warrant giving it a trial on the ambulatory patient.

Sulfanilamide has been tried on nearly every conceivable eye condition. The experimentation has in most cases been conducted in conjunction with the established methods of treatment in vogue for that disease, so that an exact determination of its value is impossible. However, marked improvement or healing of a condition in a few days or weeks, which with former methods took months, may in all fairness be attributed to the beneficial effect of the drug.

Ophthalmia of gonorrheal origin affords the most definite evidence of the effectiveness of Sulfanilamide in the specialty. The days of treatment necessary before a negative smear can be obtained have been cut from an average of twenty, to two or three days, and the total days treatment from thirty to ten.

The dreaded complication of corneal ulcer and sloughing can be prevented provided the Sulfanilamide therapy is instituted before loss of corneal substance occurs. The established methods of treatment are of course always used in conjunction. The usual dosage of 15 grains for every twenty pounds body weight in 24 hours is used, and given at 4 hour intervals. Also, about half the 24 hour dose is given initially. A blood concentration of about 5 mg. is essential. After a negative culture is obtained, the dose may be gradually reduced, but continued for ten

days longer. Failures have been attributed either to there not being a sufficiently strong concentration of Sulfanilamide in the blood, or to discontinuing the drug too soon.

Considerable work is now going on with Sulfanilamide in the treatment of trachoma. There are many conflicting opinions and sufficient time has not elapsed to justify enthusiasm or discouragement. Fred Loe reports an impressive series of 140 cases. He noted cessation of lacrimation within 24 hours, associated with loss of photophobia and improvement of vision in 72 hours where panus was present. Objectively, paling of the conjunctiva, flattening of the follicles, and a thinning out of the panus were noted between the eighth and fifteenth day. The dose of Sulfanilamide was 1-3 grain for every pound body weight for 10 days, followed by a reduction to 1-4 grain for 14 days. Gradle has had some unpleasant toxic effects from the use of the drug, and is not quite so enthusiastic, but feels that in Sulfanilamide we have a valuable new means of combating the more acute stages of trachoma. The cases on which I have used it in clinic and private practice have not been followed sufficiently long to form satisfactory conclusions. Moreover, it has been difficult to obtain cooperation from an ambulatory patient who is free from pain when doses sufficient to be effective produce toxic symptoms.

Inclusion conjunctivitis has been definitely helped by Sulfanilamide and the duration of the disease considerably shortened. The success in Ectogenous panophthalmitis and enophthalmitis has been sufficiently marked to justify its intensive use.

As the throat, nose and ear are by far the most frequent locations from which spread infections to produce septicemia and meningitis, it behooves us as workers in these areas, to use every means to clean up local inflammations and prevent their spread. In addition to local and supportive treatment, Sulfanilamide has become a most valuable and often relied upon agent in the types of infection due to hemolytic streptococci. The duration of attacks of follicular tonsillitis, and pharyngitis associated with edema of the uvula or larynx has been definitely lessened. I have used the drug in 14 cases of acute nasopharyngitis, in conjunction, of course, with the regular local and constitutional treatment. The temperature has subsided more quickly, as has the pain and dis-

charge than in cases encountered before the drug was available. I have had several cases of acute membranous tonsillitis with positive smear for hemolytic streptococci which did well for a few days on local treatment and sulfanilamide, only to flare up in spite of an increase in the dosage of the drug. Smears taken again have shown Vincents organisms from tonsils and gums. A switch to treatment directed toward the eradication of the trench mouth brought about rapid cure. The streptococcus, probably a secondary invader, merely beclouded the deeper lying spirochaetal invasion. Once a peritonsillar had formed with its encapsulated pus, little help can be expected from Sulfanilamide. The pus must first be evacuated, and then the drug can be pushed to advantage. This is likewise true of adenitis. Great benefit can be expected if suppuration has not taken place. However, when pus has once formed, incision and drainage of the suppurated gland alone will cure.

Sulfanilamide has practically no effect on the common cold, due undoubtedly to its failure to combat the cold virus. Only when secondary infection with the proper streptococcal strains occurs can we expect and obtain benefit. The more acute and recent the sinus invasion, the greater the benefit obtained from Sulfanilamide. However, it is of little or no value unless used in conjunction with adequate frequent drainage of the sinus areas. In the early acute phase, a shrinkage of the nasal membrane combined with mild suction may alone be necessary in conjunction with the drug. However, if seen a little later after a purulent maxillary sinusitis has ensued, irrigations are absolutely necessary, with the drug a questionable adjunct. If there is an odor from the antral washing indicating a more extensive involvement, (I am speaking now not of the chronic, but the subacute type of infection), the drug is of even less value. Of eleven patients of this type on which I have records, to all of whom adequate doses of Sulfanilamide were given combined with frequent antral irrigations, all but two required intra nasal surgery before a cessation of the discharge was obtained. In general it may be said that infections of the nasal mucous membrane are definitely less sensitive to Sulfanilamide therapy than those involving the throat and ear.

Sulfanilamide has been used routinely in my practice in acute otitis media for the past two years. Up until that time, my average number of operated mastoids for each of the three previous years was twelve. During

the two past winters, I have done only three mastoidectomies. One was a pneumococcus type III with an onset three weeks previously. The second had developed a subperiosteal fluctuating abscess when first seen by me. The third, in a 17 months old child, developed in spite of early drainage, careful after care, and adequate doses of Sulfanilamide. The smear at the time of paracentesis and that taken from the mastoid wound showed hemolytic and non hemolytic streptococci. Since Sulfanilamide has been employed by me, approximately 76 cases of acute otitis media have been treated. In all cases, a wide incision has been made in the posterior inferior quadrant of the drum when first seen. In the majority of the cases, there has been sufficient cooperation to permit frequent inspection of the drum, and regular daily temperature records. Cultures were taken whenever possible, but due to the fact that many drums had ruptured before being seen, and that many paracenteses were done in the home, I do not consider the findings in these cases reliable or particularly informative, as most showed a mixture of organisms. Cultures were obtained at the time of paracentesis before spontaneous rupture in 33 cases. 18 showed pure hemolytic streptococci. 11 showed hemolytic and non-hemolytic streptococci. 4 showed pure staphylococci. Recovery was slow in the staphylococcal infections, but presented no complications. Of the total number, 10 either had, when first seen, or later developed evidence of mastoiditis, such as an increase in temperature, leucocytosis, pain over the side of the head, swelling or marked tenderness over the mastoid area. All of these patients were hospitalized and Sulfanilamide therapy given in a ratio of 1 gram for every 20 pounds of body weight. Daily hemoglobin and red cell counts were made. When there was a noticeable decrease of either hemoglobin or red blood cells, large doses of Jeculin were given. In all cases, save the one mentioned above, there was improvement within 24 hours, and gradual but definite recovery thereafter. The drug was continued in full strength until recovery seemed assured, and gradually reduced thereafter until no discharge came from the middle ear.

Adequate drainage of pus is just as important in acute suppurative otitis media as in any other part of the body. Those who expect Sulfanilamide to do the work of a good sharp paracentesis knife, will be badly fooled and their patient possibly seriously harmed. Seeming improvement, leading

to early removal of the drug, will leave a smouldering focus, which may, unmolested, develop an intracranial complication.

To summarize, we may characterize Sulfanilamide as a comparatively new, definitely dangerous drug, which because of its brilliant effect on restricted types of infection has been and will continue to be used and abused to detriment of physician and patient. Before employing it, a physician should thoroughly familiarize himself with its dosage, toxicity, and limitations. At no time should it be given when large doses are required unless the patient can be kept under strict observation.

DISCUSSION

A. L. Bass: Discussing this subject makes me think of the time the late Dr. T. Cook Smith brought the news back about this drug from the Southern Medical Association in Richmond.

In 1935 Domagk injected streptococcus hemolyticus in the peritoneal cavity in 26 mice. One and a half hours later he injected some prontosil into the stomach of twelve of the mice. Those not injected died within three days while those injected all lived. It is a wonderful drug. Dr. Pryor told about its action.

As for the dosage, I have not used over sixty grains a day. In children I generally give 15 grains per day. I supplement my usual treatment with sulfanilamide and do not depend on it solely. In most cases the vast majority benefited. I had one toxic effect from it before I got to using sodium bicarbonate. This patient had eruption all over the body except on the head and neck. I took her off the drug, put her on soda, and skin cleared up. In ten days she came back with it and I found out she had taken some more of the drug. Since then I have used the sulfanilamide with soda and haven't had any toxic effects.

I would like to ask what you think of these large doses. I have never been able to convince myself they are necessary and I think they are more or less overdone. The cases I have used it in have been streptococcus, pharyngitis, sinusitis of the sero-purulent type, otitis media, erysipelas, cellulitis of the alae of the nose, where the infection enters through the ophthalmic vein into the cavernous sinus (I hope I never see one.) In a trachoma case which I had treated for about two months and had to use Christian Science to convince myself he was getting better, I thought since they were curing everything with sulfanilamide, I would try it. I gave him ten grains t. i. d. and when he came back in ten days he was very much better. I said, "Kennie, you are a whole lot better. What have you been doing?" He said, "Taking those tablets you prescribed for me." I had to look at my record to recall that he was

taking sulfanilamide. He has been apparently well for over a year.

I saw Dr. Gradie in New York last fall. He is very enthusiastic about the drug. He said within five years he thought trachoma would be eradicated. Basman and Perly report two cases of brain abscess due to type III pneumococcus and non-hemolytic strep which were cured with sulfanilamide. I had two cases about a year ago of pneumococcus type III, one an infant with facial paralysis which recovered without operation under simple treatment.

While we are trying to cure everything as Dr. Pryor said we should try to place the drug in the category where it belongs.

Joseph D. Heitger: Since the use of sulfanilamide we ear, nose and throat men can expect to be confronted with the possibility of the more frequent problem of otitic hydrocephalus. Retention of pus in any of the cavities contiguous to the brain may produce phenomena which tax our diagnostic ability to the utmost. Pus retention in a simple uncomplicated otitis media may produce headaches, vomiting, vertigo, stupor, fever, and even pupillary changes, and yet these phenomena have been made to disappear by simple incision of the tympanic membrane. Any primary focus in the labyrinth, middle ear, mastoid, petromastoid, or paranasal sinuses should always be eliminated first. With this done, the use of sulfanilamide will favor diagnosis and prognosis and aid materially in the complete recovery of the patient. Sulfanilamide, like transfusion should not transplant necessary and properly directed surgical procedures, but should be used to supplement them.

Sulfanilamide has been shown to attenuate bacteria and increase phagocytosis. The action of sulfanilamide has a tendency to change the pathology present in that its progress is stopped in the stage of pathological physiology so that it does not progress to pathological anatomy. In the stage of pathological physiology the changes often become reversible, with return to normal. The use of sulfanilamide should therefore be continued for some time after the recovery of the patient in order to favor the return to normal of the pathological physiology present. We should not forget that toxins and bacteria produce changes in the arachnoid cavity as a unit, and while chemotherapy and blood transfusions are of great help the elimination of the primary focus of infection, when possible, combined with lumbar or ventricular puncture, will often quickly turn the balance in favor of the patient, enabling him to make a complete recovery. I can say, without fear of challenge, that in the last three years there have been more reports in the literature of recoveries from otitic meningitis than there have been in the last thirty years. These have been proven cases of meningitis in that the organism has

been cultured from the cerebrospinal fluid. These recoveries are largely attributable to our better knowledge of how to eliminate the primary focus of infection, followed by proper dosage of sulfanilamide.

When intracranial symptoms appear it is at times difficult to make a differential diagnosis because it is hard to decide which symptoms come from involved tissue and which from the almost inevitably present hydrocephalus. Certain cases of acute hydrocephalus, not associated with any intradural lesion, may simulate encephalitis or brain abscess so closely that the diagnosis can be made with difficulty, or not at all.

When choked discs appear and secondary optic atrophy is threatened the decision concerning the proper therapeutic measures is often most difficult to make. It is in these cases that lumbar puncture or ventricular puncture will often assist in the diagnosis and treatment, enabling the patient to make a rapid and often almost miraculous recovery.

Sulfanilamide should not be used routinely in infections of the ears, sinuses or throat, but when used should be used in sufficient dosage, with the proper precautions regarding observation and blood counts in order to discover the first signs of toxicity of the drug. When sulfanilamide is used I think the patient should be in bed and at rest, because if he is ill enough to require its use he is ill enough to be in bed anyway. Sulfanilamide has been shown to act so quickly that antibody formation by the tissues is greatly reduced. If the drug is stopped too quickly and a recurrence of the infection occurs, the body, as a whole, will be at a disadvantage because of its reduced antibody formation, and such recurrence will therefore make more rapid inroads on the body defenses than the original infection did.

Will R. Pryor, (in closing): Dr. Bass has raised the question of the advisability of large doses. I realize the danger of the drug, and feel that the size of the dosage should be varied according to the severity of the disease. If the patient's life is in greater danger from the disease than the drug, then use maximum doses of the drug.

I saw a number of cases of pneumococcus type III infection of the middle ear while in Vienna. The Viennese felt that every case would sooner or later come to operation, usually associated with an intracranial complication. Sulfapyridine is undoubtedly our answer to this serious menace. A very good otologist in Cincinnati recently told me that he had treated six proven cases of pneumococcus type III infection of the middle ear which gave positive culture at the time of paracentesis, with sulfapyridine. All six recovered without complications.

NEWS ITEMS

An appropriation of \$1,315,000 has been made for the addition of a nurses' home, officers' quarters and a building for women narcotic patients at the United States Public Health Service Hospital near Lexington.

Dr. Irvin Abell addressed the Louisville Community Hospital Association, Louisville, at the Pendennis Club, June 14th.

Mr. and Mrs. H. E. Hieronymus of Louisville, announce the marriage of their daughter, Dr. Ethel Heironymus to Mr. George T. O'Brien, New York.

Dr. J. L. Seay, Eastwood, was killed when struck by an automobile on Shelbyville road.

Dr. Harry F. Pfingst, nephew of Dr. A. O. Pfingst, has recently become associated with Drs. Pfingst and Townes, in the practice of Ophthalmology in Louisville. Dr. Pfingst after graduating from the University of Louisville Medical Department, served a year as interne at the Louisville City Hospital rotating service, and recently attended a graduate course in Ophthalmology in Philadelphia.

Dr. Kenneth Cameron of Fort Williams, Scotland, who is at Johns Hopkins Hospital, Baltimore, on a Rockefeller Foundation scholarship, spent a few days last week with Dr. William K. Keller, and Mrs. Keller, Louisville.

Dr. William Parker Ross, 75, second mayor of Madisonville and practicing physician in Hopkins County 56 years, died suddenly at his home in Madisonville. Dr. Ross had been ill since early February. Several days before his death he underwent a major operation in Hopkins County Hospital which promised and resulted in temporary relief only.

He began the practice of his profession when 19 years of age with his father, and father and son had a combined service of more than 100 years as physicians in Hopkins County. Dr. Ross, a Republican, was elected mayor for four years by popular vote to succeed H. H. Holeman, Democrat, the first mayor of Madisonville. He served only one term. The mayor was paid a salary of \$50 a year in those days.

Born May 21, 1864 in Madisonville, Dr. Ross was the son of Dr. William Stewart Ross and Sarah Dimmit Ross, members of pioneer Hopkins county families. After practicing medicine in Madisonville many years, Dr. Ross was chosen physician for the St. Bernard Coal Company at Earlington, and served ten years before returning to Madisonville.

BOOK REVIEWS

SURGICAL ANATOMY: By C. Latimer Callander, A. B., M. D., F. A. C. S., Associate Clinical Professor of Surgery and Topographic Anatomy, University of California Medical School; Member of Founders' Group of the American Board of Surgery; Member of American Association of Traumatic Surgery; Associate Visiting Surgeon to the San Francisco Hospital. With a Foreword by Dean Lewis, M. D., Sc. D., LL.D., F. A. C. S. Second Edition, Entirely Reset. 858 pages with 819 illustrations. Philadelphia and London. W. B. Saunders Company, 1939. Cloth, \$10.00 net.

No book in recent years has been published which contains such a wealth of material, so many illustrations as this volume.

In the revision much has been arranged and in many instances rewritten, these changes were necessary to accommodate the required additions and to allow deletions of unessential text and illustrations.

Many pen and ink illustrations have been added showing operations in great detail, obsolete text and out of date illustrations have been deleted.

HANDBOOK OF ORTHOPEDIC SURGERY—By Alfred Rives Shands, Jr., B. A., M. D. Associate Professor of Surgery in charge of Orthopedic Surgery, Duke University School of Medicine and Chief of the Orthopedic Service, Duke Hospital, Durham. Member of the American Orthopedic Association, American Academy of Orthopedic Surgeons, and the International Society of Orthopedic Surgery, in collaboration with Richard Beverly Raney, B. A., M. D., Instructor in Orthopedic Surgery, Duke University School of Medicine. With 169 illustrations. The C. V. Mosby Company, 3525 Pine St., St. Louis, Mo., Publishers. Price \$5.00.

The purpose of this book is to present for the consideration of the medical student and the general practitioner the fundamental facts and principles of orthopedic surgery as concisely as possible and yet in sufficient detail to convey a well rounded knowledge of the subject.

An attempt has been made by the author to present not the views of one man or one school but the consensus of opinion as recorded in orthopedic text books and in the more recent orthopedic literature criticized and tempered with the experience and thought of twenty-four teachers of orthopedic surgery and allied subjects representing 18 different

medical schools. Each chapter has been reviewed by more than one authority. All the illustrations used are clear and to the point. In the bibliography are grouped most of the outstanding American and English articles on various orthopedic subjects. Arranged so that the reader who desires gaining further knowledge will find these an excellent source of detailed and authoritative knowledge.

The subject matter of the text has been divided into twenty-four chapters in accordance with the report of the Committee on Under Graduate Instructions in Orthopedic Surgery of the American Orthopedic Association which in 1934 called attention to the fact that in several of the leading medical school 24 class periods of an hour's duration are profitably employed for undergraduate instructions. This book is a valuable addition to any library.

GONORRHEA IN THE MALE AND FEMALE: By P. S. Pelouze, M. D., Assistant Professor of Urology, University of Pennsylvania; Consulting Urologist to Delaware County Hospital; Special Consultant to United States Public Health Service; Member of Board of Directors, American Social Hygiene Association and American Neisserian Medical Society. Third Edition, Thoroughly Revised. 489 pages with 144 illustrations. Philadelphia and London: W. B. Saunders Company, 1939. Cloth, \$6.00 net.

This third revised addition to the literature on gonorrhea is a very welcome addition to any physician's library regardless of his specialty as this subject touches every field of medical literature.

Many changes and additions have been made. Sixteen entirely new chapters to the main body of the book have been added which include such subjects as prolonged hyperthermia, sulfanilamide and its derivatives, the estrogenic hormones.

Many new charts and tables have been included.

CLINICAL BIOCHEMISTRY: By Abraham Cantarow, M. D., Associate Professor of Medicine, Jefferson Medical College; Biochemist, Jefferson Hospital, and Max Trumper, Ph. D., clinical chemist and Toxicologist; formerly in charge of the Laboratories of Biochemistry of the Jefferson Medical College and the Hospital. With a foreword by Hobart A. Reimann, M. D. Professor of Medicine, Jefferson Medical College. Second Edition, Revised. 666 pages.

Philadelphia and London: W. B. Saunders Company, 1939. Cloth, \$6.00 net.

As the science of Biochemistry increases in importance with the constant increase in the knowledge of the other allied sciences, it has become imperative for the collection of such knowledge in a compact practical form as is exemplified in this volume. On account of the great amount of knowledge gained in recent years the author has revised and added many new topics to the volume.

Only those tests have been described which depend upon the clinician as well as the laboratory for their successful performance and those the results of which can be interpreted only with some understanding of the technic.

ANEMIA IN PRACTICE: By William P. Murphy, A. B., M. D., Associate in Medicine, Harvard Medical School; Senior Associate in Medicine, Peter Bent Brigham Hospital, Boston; Consultant Hematologist, Melrose Hospital, Melrose, Mass. 344 pages with 41 illustrations. Philadelphia and London: W. B. Saunders Company, 1939. Cloth \$5.00 net.

The author has assembled all the valuable data that has accumulated during the past fifteen years which has been so productive in the field of hematology. Those methods that have proven to be the most useful and practical have been included in this volume.

The information presented and the methods used in presenting it has made this book of particular value to the medical student, interne and practicing physician.

THE SPECTACLE OF A MAN: By John Coignard. The Jefferson House, Publishers, New York. Price, \$2.50.

This book is the story of a year in a man's life during which he was being treated by analytical psychotherapy. The author has succeeded in conveying a very fair impression of what psychoanalysis tries to accomplish. It is a fascinating story of human behavior, showing how a man is freed of unhappiness and torturing jealousy and learns to live successfully.

THE ETIOLOGY OF TRACHOMA, by Louis A. Julianelle, Ph. D. Published by the Commonwealth Fund, 41 East 57th street, New York City, N. Y. Price \$3.25.

This volume on the etiology of trachoma gives a summary of the work done by the Trachoma Commission at Washington Uni-

versity, as a part of a comprehensive and detailed review of the whole subject. It is the first monograph on this topic to be published since 1914, the standard textbook references and most of the critical reviews published in recent years being brief and limited in scope.

Dr. Julianelle discusses trachoma with respect to epidemiology, causation, and infectivity, and deals particularly with the microorganisms associated with trachoma, the inclusion body, the role of virus in trachoma, and the purification, cultivability, and properties of the infectious agent.

In addition to its importance to ophthalmologists, this intensive study may be of value to bacteriologists and pathologists.

ON THE MODE OF COMMUNICATION OF CHOLERA, by John Snow, M. D. Member of the Royal College of Physicians, Fellow of the Royal Med. and Chir. Society, Fellow and Vice President of the London Medical Society. Being a Reprint of Two of his Papers. Published by the Commonwealth Fund, New York.

Dr. Snow (1813-1858) was a pioneer in modern epidemiology. His brilliant investigation of the method of transmission of cholera, when the disease was frequently epidemic in England, commands admiration not only as a monumental achievement for his time, but also as a model of patient and clear-sighted search for the ways in which disease is spread.

Of Dr. Snow's classic papers, as originally published, only a few copies are known to exist, and there has long been a hope on the part of epidemiologists and others that they might be made generally available. Their republication in the present volume was suggested by Delta Omega, honorary professional society in the field of public health.

THE ROMANCE OF PROCTOLOGY, by Charles Elton Blanchart, M. D., Medical Success Press, Publishers, Youngstown, Ohio. Price \$4.50.

This volume is a story of the history and development of this branch of surgery from its earliest times to the present day, including brief biographic sketches of those who were its pioneers. Of special interest is the chapter devoted to the Kentucky pioneer in this field, Dr. J. M. Mathews.

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NEXT MEETING: BOWLING GREEN
SEPTEMBER 11-14, 1939

EDITORIALS

DR. ABELL HONORED

The medical profession of Kentucky again has opportunity to congratulate Dr. Irvin Abell for further honors worthily bestowed. On Friday, June ninth at Milwaukee, Wisconsin, Dr. Abell had conferred upon him an honorary law degree by Marquette University, the significance of which is expressed in the following:

"Irvin Abell, a graduate of St. Mary's College, a Doctor of Medicine of Louisville Medical College, a post graduate student in the University of Berlin, recipient of the Laetare Medal in 1938, professor of surgery at Louisville University since 1904, fellow of the American College of Surgeons and the American Surgical Association, who, by his long and distinguished service to the field of Medicine and particularly by the capable and efficient administration of his office as President of the American Medical Association in 1938-1939, when that organization was confronted with most difficult problems concerned with basic social principles of the practice of medicine, is entitled to the Degree of Doctor of Laws, Honoris Causa."

On June third the Degree of Doctor of Science was conferred upon Dr. Abell by Georgetown University, Washington, D. C., and on June thirteenth, the Degree of Doctor of Science by Manhattan University, New York.

On behalf of the medical profession of Kentucky which has followed Dr. Abell's achievements and honors with great pride, we desire again to acclaim him for this marked distinction.

P. E. B.

THE ART AND HOBBY EXHIBIT

The exhibit of hobbies, pieces of art and handicraft shown at the annual fall meeting of the Association last year received quite a favorable comment. We are pleased to announce that a larger showing is expected this year. Preparation is being made to exhibit paintings, drawings, sculpturing, art craft, handiercraft, photographs and hobby products of all kinds.

What is your hobby? Write your Committee about it, which is composed of Jess Hill Love, Chairman, R. Glen Spurling and Maurice G. Buckles.

THE CHALLENGE OF TUBERCULOSIS

In spite of the fact that tuberculosis has taken the lives of 90,370 Kentuckians since 1911, in spite of the declining death rate, and notwithstanding it still takes a toll of approximately 2,000 per year and is the leading cause of death in the active period of life a spirit of indifference toward this common enemy continues to exist among many members of the medical profession.

Perhaps we are indifferent toward tuberculosis because it has been with us so long. We may have lost interest, because, in the advanced stages, it seems so hopeless. We see the helplessness of the poverty stricken tuberculous patient, impulsively shrink from the almost impossible task of doing anything worthwhile, and often the easiest way out is the path of least resistance. This procedure might be excused, if only the poor tuberculous victim is considered, but the contacts in the home and community should challenge the best that is in every physician. In this contact group there are those in whose bodies these death dealing germs are just becoming established, and they can be spared the tragic fate of the "advanced chronic" if we take the time and interest needed to apply modern methods in tuberculosis control to each individual contact.

Dr. Thomas Parran, Jr., while acting as State Commissioner of Health of New York, speaking to the New York Tuberculosis Association, said "The greatest need for health action is where the greatest saving of life can be made—First, I would place tuberculosis. The tremendous decline in tuberculosis—should not obscure the fact that it is still the leading cause of death in the 20-40 age group. Our slogan used to read: 'Tuberculosis is preventable; tuberculosis is curable'. I maintain that it may now be amended to read 'Tuberculosis can be wiped out in our State and Nation'."

No well informed thoughtful physician would take issue with this great leader in matters of health. Tuberculosis is an infectious disease. The Great Pasteur long ago suggested that it was within the power of man to banish all infectious diseases from our midst, yet after being in possession of the fundamental epidemiological facts of tuberculosis control for more than half a century, we still allow it to be the leading American murderer in the active period of life.

Tuberculosis can, and will be controlled when the medical profession appreciates its responsibility and accepts the challenge as defenders of mankind against the great enemy, tuberculosis.

THE DETECTION AND SPREAD OF SYPHILIS IN RELATION TO MARRIAGE

The Kentucky Premarital Law, which will become effective March 1, 1940, requires a physical examination of and a laboratory test on every man and woman applying for a marriage license in this State. This law is typical of Kentucky health statutes in that it definitely preserves the autonomy and responsibility of physicians engaged in private practice. The requirements of the Act are simple; specimens must be taken by the physician and examined in an approved laboratory. Upon receipt of the laboratory report, the physician will determine from it and from the clinical examination whether either or both applicants are free from venereal disease. If found to be free from venereal infection, the examining physician is then required to certify this fact, on a prescribed form, to the licensing clerk in the jurisdiction in which the application for the marriage license is made. It is thus seen that the effectiveness of this law will depend largely upon the clinical ability, honesty and integrity of the physicians throughout the State.

There is not the slightest reason to doubt that the members of the medical profession in Kentucky will accept this responsibility in the same spirit in which they have always accepted responsibilities for the health of the people of the Commonwealth. With few exceptions, they will assume and discharge the obligation imposed to the best of their several abilities, assuring themselves, by every means at their disposal, that the individuals, certified for marriage licenses have no venereal infection. It should always be remembered that this law was passed in response to the demands of an aroused general public opinion and that it is one of the newer public health measures directed to prevention of the spread of venereal diseases. Sixteen States have already passed premarital laws along similar lines and each year additional States are being added to this list.

It must be remembered by every physician that increased opportunity for service, such as provided by this law, carries increased responsibility. The Kentucky State Medical Association is determined that there shall not be a repetition of the situation that arose when physicians were given the responsibility for prescribing alcohol during the prohibition regime. A certificate of freedom from venereal disease is the definite responsibility of the certifying physician, but failure to make a proper examination, and to secure accurate and definite specimens from individuals con-

cerned would render any offending member of the profession liable for revocation of his certificate. We realize this statement is unnecessary for 90 per cent of the profession of the State, but it cannot be omitted, as a warning to those physicians who are not thoroughly equipped by training and experience for making such examination.

The United States Public Health Service estimates that ten per cent of the population of the whole country under fifty years of age have had, now have or will have syphilis. Fully ninety per cent of this ten per cent have contracted or will contract syphilis between the ages of sixteen and forty years. That is the disease strikes during the marriageable age. This being so, it is reasonable to assume that the premarital law will tend to lower the incidence of syphilis among married people, as well as reduce the large number of babies being born with syphilis each year. Every parent desires a healthy baby. When the possible ravages of this disease among their future offspring is realized, it is felt that the vast majority of the applicants for marriage licenses will not only willingly accept, but welcome the examination and laboratory test required by the premarital act.

DR. C. H. SPILLMAN

The Eighty-Ninth Annual Session of the Kentucky State Medical Association will be known as The C. H. Spillman Memorial Meeting. Dr. Spillman was President of the Kentucky State Medical Association in 1856 and read a paper on "Suits of Malpractice" before the 1854 session of the Association. Beyond the fact that his residence was Harrodsburg, we have been able to find little or no data regarding his life. Any physician having information relating to Dr. Spillman is requested to communicate with the JOURNAL.

PHYSICIANS ATTENDING THE WORLD'S FAIR

Physicians, public health workers, medical scientists and other professionals visiting the New York World's Fair 1939 will find reserved for their exclusive use the Professional Club. Here members of the nation's professional health, medical, dental and nursing associations have a place to meet their colleagues in quiet, congenial surroundings.

The Club is on the main floor of the Medical and Public Health Building which is located on the Theme Plaza, its main entrance being directly opposite the Helicline leading

around the Perisphere to the Trylon, where much of importance takes place daily. The visitor will find awaiting him a comfortable lounge, attractively decorated and furnished, a bar and snack bar, checking facilities, rest rooms, stenographic service, telephones and other conveniences of a private club.

Membership in the Club is limited to accredited members of the medical and public health and allied professions and to representatives of exhibit sponsors. Professional members pay no dues, but there is a small certification charge to cover the cost of validating credentials. Products of manufacturers sponsoring scientific and educational exhibits in the Medical and Public Health Building are on display in showcases set artistically into the walls of the lounge. The Club serves as a place where these and other sponsors of exhibits in the main exhibition halls may meet members of the medical and allied professions under pleasant circumstances.

The Medical and Public Health Exhibit, being both scientific and educational, comprises probably the largest single enterprise of its kind heretofore undertaken specifically for adult health education. The exhibit is in two sections. A vast Hall of Man, which sets forth in unique fashion essential information on human anatomy and physiology, is under sponsorship of the American Museum of Health, with generous assistance from a number of philanthropic foundations and public-spirited life insurance companies and commercial institutions. Adjoining the Hall of Man, is the Hall of Medical Science and Public Health, an outstanding collection of exhibits on such subjects as tuberculosis, pneumonia, syphilis, maternity and child health.

Local physicians, public health workers and allied professionals will utilize the Club to entertain out-of-town guests brought here by the many meetings of national and international groups to be held in New York during the Fair. Members of the International Congress of Microbiology meeting in September, 1939, to use one example, may turn to the club not only for information regarding the medical and public health resources in and about the City, but for guidance in seeking authoritative local sources of information on the latest developments in technical aspects of their specialized fields.

The officers of the club are Dr. James R. Reuling, Jr. President; Dr. Edward R. Cuniffe, vice-president; Dr. Matthias Nicoll, vice-president; Dr. B. Wallace Hamilton, treasurer, and Mrs. Willimina Rayne Walsh, secretary.

The Club has its own private entrance, leading from the garden court of the Medical and Public Health Building, into surroundings which combine an intensely modern atmosphere with the bizarre.

For further informations please communicate with Mr. Homer Calver, Secretary, The American Museum of Health, 30-Rockefeller Plaza, New York.

Members of the Kentucky State Medical Association are cordially invited to make use of this Club during their visit to the fair.

PEDIATRIC CONFERENCE

A Pediatric Conference will be held, Monday, September 11th., the first day of the State Medical Meeting on the second floor of the Library Building, Western Kentucky State Teachers College, at Bowling Green. Subjects have been selected that will be of interest to physicians in general practice and all others who are interested in children's work.

PROGRAM

A. M.

10-10:30 "Bacillary Dysentery in Infancy and Childhood", Richard G. Elliott, M. D., Lexington.

10:30-11 "Excessive Infant Feeding", Clark Bailey, M. D., Harlan.

11-11:30 "Lead Poisoning in Children", J. J. Glaboff, M. D., Louisville.

11:30-12 "Some Practical Aspects of Children's Problems", Wm. Keller, M. D., Louisville.

P. M.

2-3 A Clinic, Philip F. Barbour, M. D., Louisville.

3-4 A Round Table Conference on Pneumonia, James Pritchett, M. D., Louisville.

There will be sufficient time allowed following each paper for a general discussion. We feel that this program will be of great value and sincerely hope that as many as possible will attend and take part in the discussion.

Philip F. Barbour, M. D., Chairman
Lee Palmer, M. D., Secretary

COUNTY SOCIETY REPORTS

Hopkins: The Hopkins County Medical Society held its first meeting of the summer at the Madisonville Country Club, June 6, 1939. The meeting was well attended by local doctors as well as physicians from surrounding Counties. An excellent barbecue was enjoyed on the Club lawn prior to the meeting.

The session was called to order by Dr. A.

F. Finley, president, and minutes of the preceding meeting were read by the secretary, Dr. David L. Salmon. A resolution was adopted by the Society in remembrance of Dr. W. P. Ross who recently expired.

Two splendid papers were given by Dr. John Youmans and Dr. R. H. Kampmeier of Vanderbilt, the former discussing Practical Aspects of Vitamin Deficiency and the latter The Clinical Aspects of Lymphogranuloma Venereum with Special Reference to Serum Proteins.

The next meeting will be held the first week in July, with some aspects of Thyroid Gland Disease as the probable topic.

David L. Salmon, Secretary

Jefferson: The April program of the Jefferson County Medical Society was as follows:

April 3

Business Session began at 7:45 p. m. Scientific Program 8:15 p. m. Case Report: "Hyperpyrexia." R. N. Holbrook, M. D.

1. "Psychiatric Problems Frequently Encountered in Private Practice," Wm. Karl Keller, M. D.

Discussion opened by W. E. Gardner, M. D.

2. "Perinephric Abscess," E. L. Shiflett, M. D.
Discussion opened by Jos. C. Bell, M. D.

April 17

Business Session began at 7:45 p. m. Scientific Program 8:15 p. m.

Refresher Course in Hematology 8:00 to 8:15.
The Pathogenesis of Anemia. "Anemia as a Problem for the Psychiatrist," Department of Pathology, University of Louisville, Harold Gordon, M. D.

1. "Multiple Abscess of the Liver," Geo. A. Hendon, M. D.

Discussion opened by David S. Traub, M. D.

2. "Immediate Treatment of Automobile Injuries," Pat R. Imes, M. D.

Discussion opened by Chas. M. Edelen, M. D.

3. Moving Picture: The Treatment of Trichomonas Vaginalis.

W. B. TROUTMAN, Secretary.

Harlan: The Harlan County Medical Society was host to the Eleventh Councilor District at Harlan, Saturday evening, May 27, 1939.

The meeting started with dinner at the Lewallen Hotel at 6:00 p. m., and the Scientific Program followed immediately after the dinner:

Modern Concepts of Pulmonary Tuberculosis, Maurice G. Buckles, M. D., Louisville.

Treatment of Pneumonia in Children, Harry Andrews, M. D., Louisville.

Empyema, Irvin Abell, Jr., M. D., Louisville.

C. M. BLANTON, Secretary.

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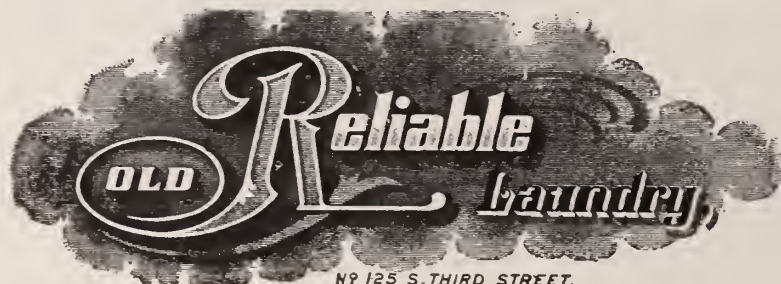
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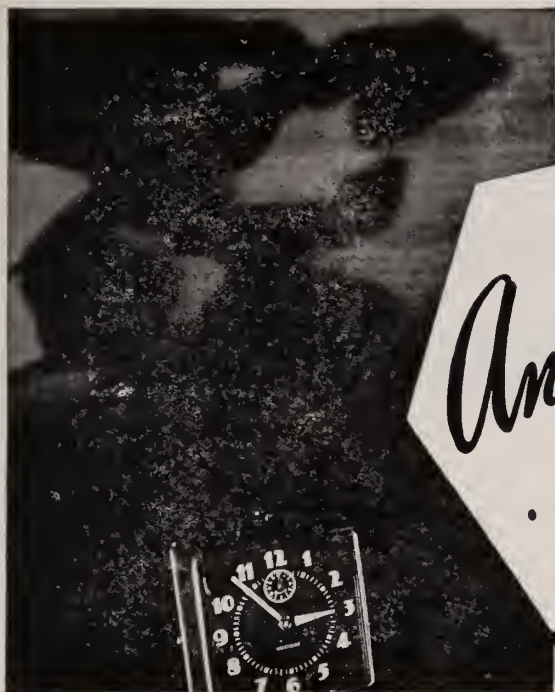
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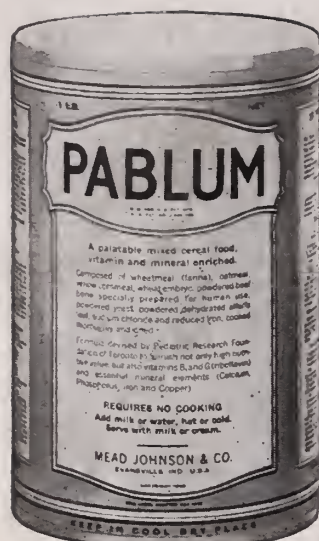
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VOL. 37, No. 8

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AUGUST, 1939

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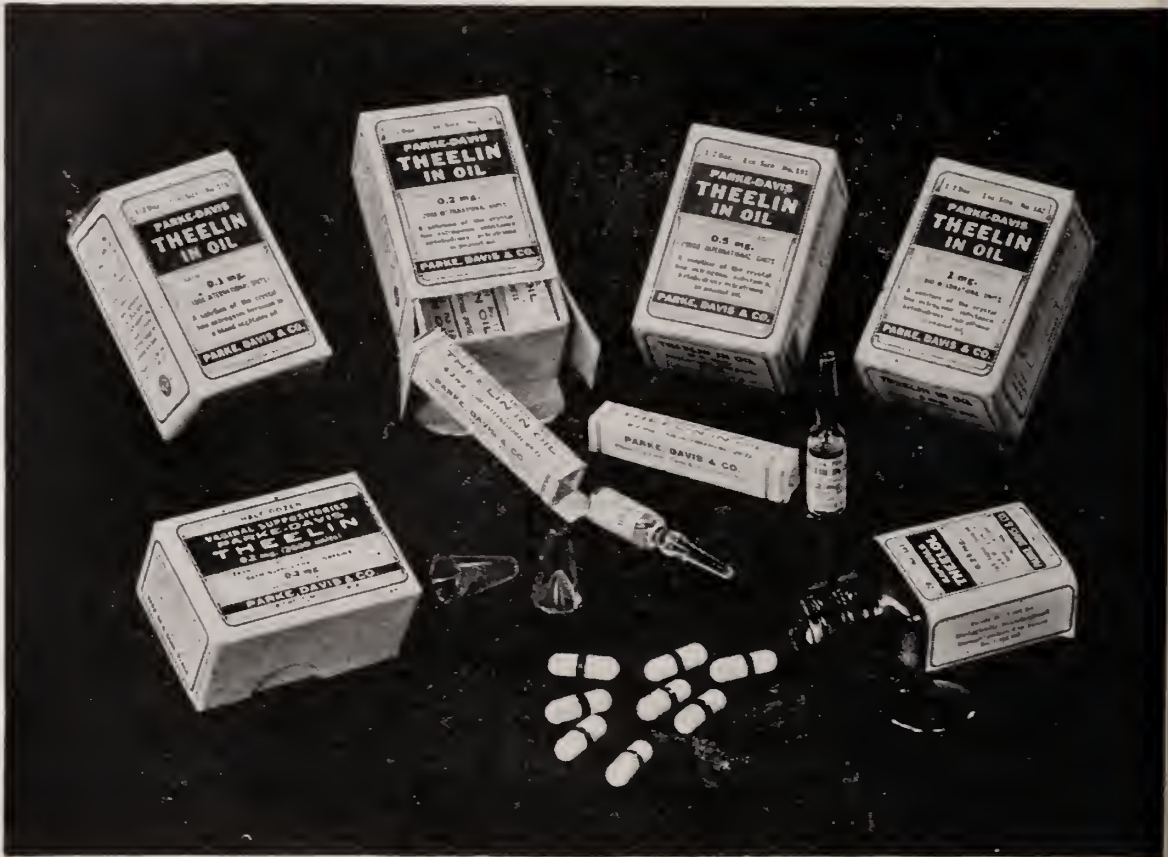
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- ☐ N. Y. State Jour. Med. 1935, 35-No. 11,590—"Irritating Properties of Cigarette Smoke as Influenced by Hygroscopic Agents."
- ☐ Laryngoscope, 1935, XLV, No. 2, 149-154—"Some Clinical Observations on the Influence of Certain Hygroscopic Agents in Cigarettes."
- ☐ Laryngoscope, 1937, XLVII, 58-60—"Further Clinical Observations on the Influence of Hygroscopic Agents in Cigarettes."

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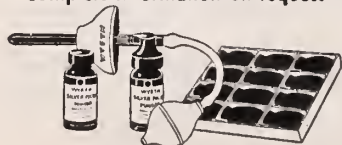
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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Adair	N. A. Mercer	Columbia	August 2
Allen	A. O. Miller	Scottsville	August 23
Anderson	J. B. Lyen	Lawrenceburg	August 7
Ballard	F. H. Russell	Wickliffe	
Barren	Rex Hays	Glasgow	August 16
Bath	H. S. Gilmore	Owingsville	August 14
Bell	E. S. Wilson	Pineville	August 11
Boone	R. E. Ryle	Walton	August 16
Bourbon	Eugene L. D. Blake	Paris	August 17
Boyd	Hubert J. Pritchard	Catlettsburg	August 1
Boyle	P. C. Sanders	Danville	August 15
Bracken-Pendleton	W. A. McKenney	Falmouth	August 24
Breathitt	Philip Bress	Jackson	August 17
Breckenridge	J. E. Kincheloe	Hardinsburg	1
Bullitt	G. F. Brockman	Shepherdsville	
Butler	G. E. Embry	Morgantown	August 2
Caldwell	W. L. Cash	Princeton	August 1
Calloway	Hugh L. Houston	Murray	August 10
Campbell-Kenton	Joseph H. Humpert	Covington	
Carlisle	E. E. Smith	Bardwell	August 1
Carroll	J. M. Ryan	Carrollton	
Carter	Don E. Wilder	Grayson	August 8
Casey	William J. Sweeney	Liberty	August 24
Christian	D. M. Clardy	Hopkinsville	August 15
Clark	R. E. Strobe	Winchester	August 18
Clay	J. L. Anderson	Manchester	August 8
Clinton	S. F. Stephenson	Albany	August 19
Crittenden	C. G. Moreland	Marion	August 14
Cumberland	W. F. Owsley	Burkesville	August 2
Daviess	James E. Hix	Owensboro	August 8 & 22
Elliott			
Estill	Virginia Wallace	Irvine	August 9
Fayette	D. E. Scott	Lexington	August 15
Fleming	Roy Orsburn	Flemingsburg	August 9
Floyd	J. G. Archer	Prestonsburg	August 30
Franklin	Grace R. Snyder	Frankfort	August 3
Fulton	J. C. Morrison	Fulton	August 9
Gallatin	J. M. Stallard	Sparta	August 17
Garrard	J. E. Edwards	Lancaster	August 17
Grant	Paul E. Harper	Dry Ridge	August 16
Graves	H. H. Hunt	Mayfield	August 1
Grayson			
Green	S. J. Simmons	Greensburg	August 7
Greenup	R. L. Compton	Greenup	August 11
Hancock	F. M. Griffin	Hawesville	August 7
Hardin	D. E. McClure	Elizabethtown	August 10
Harlan	W. E. Riley	Harlan	August 19
Harrison	W. B. Moore	Cynthiana	August 7
Hart	S. F. Richardson	Munfordville	August 1
Henderson	J. Leland Tanner	Henderson	August 14 & 28
Henry	Owen Carroll	New Castle	August 3
Hickman	Layson B. Swann	Clinton	August 3
Hopkins	David L. Salmon	Madisonville	August 3
Jackson	Thomas L. Boneta	McKee	August 5
Jefferson	W. B. Troutman	Louisville	
Jessamine	J. A. VanArsdall	Nicholasville	August 24
Johnson	P. B. Hall	Paintsville	August 12
Knox	W. Parker Clifton	Barbourville	August 17
Larue			
Laurel	Oscar D. Brock	London	August 9
Lawrence	L. S. Hayes	Louisa	August 21
Lee	W. D. McCollum	Beattyville	August 12
Leslie			1
Letcher	J. E. Johnson	Jenkins	August 29
Lewis	C. P. Pennington	Vanceburg	August 21
Lincoln	Lewis J. Jones	Hustonville	August 18
Livingston	C. M. Fischbach	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	August 1
McCracken	J. V. Pace	Paducah	
McCreary	R. M. Smith	Stearns	August 7
McLean	A. R. Will	Oshtown	August 10
Madison	C. B. Billington	Richmond	August 17
Marion	W. E. Oldham	Lebanon	August 22
Marshall	S. L. Henson	Benton	August 16
Mason	C. W. Christine	Maysville	August 9

COUNTY	SECRETARY	RESIDENCE	DATE
Meade	S. H. Stith	Brandenburg	August 24
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	August 8
Metcalfe	E. S. Dunham	Edmonton	August 1
Monroe	George E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mount Sterling	August 8
Morgan	Wallace Byrd	West Liberty	
Muhlenberg	E. L. Gates	Greenville	August 8
Nelson	R. H. Greenwell	Bardstown	
Nicholas	T. P. Scott	Carlisle	August 21
Ohio	Oscar Allen	McHenry	August 2
Oldham			
Owen	K. S. McBee	Owenton	August 3
Owsley	John R. Aker	Boonsville	August 7
Perry	W. W. Buckhold	Hazard	August 14
Pike	H. K. Bailey	Pikeville	August 21
Powell	I. W. Johnson	Stanton	August 7
Fulaski	M. C. Spradlin	Somerset	August 10
Robertson			
Rockcastle	Lee Chestnut	Mount Vernon	August 4
Rowan	A. W. Adkins	Morehead	August 14
Russell	J. R. Popplewell	Jamestown	August 14
Scott	Carl M. Gambill	Georgetown	August 3
Shelby	A. D. Doak	Shelbyville	August 17
Simpson	N. O. Witt	Franklin	August 8
Spencer			
Taylor	W. B. Atkinson	Campbellsville	August 10
Todd	B. E. Boone, Jr.	Elkton	August 2
Trigg	H. L. Wallace	Cadiz	August 30
Trimble			
Union	D. C. Donan	Morganfield	August 30
Warren Edmonson	W. O. Carson	Bowling Green	August 9
Washington	J. H. Hopper	Willisburg	August 16
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	August 25
Whitley	C. A. Moss	Williamsburg	
Wolfe	G. M. Center	Campton	August 7
Woodford	George H. Gregory	Versailles	August 3

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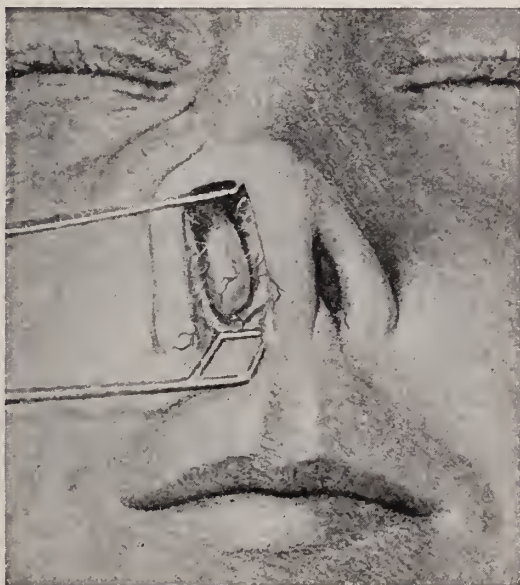


Fig. 1 — 1:45 P. M. Before treatment. Note extreme venous stasis and edema.

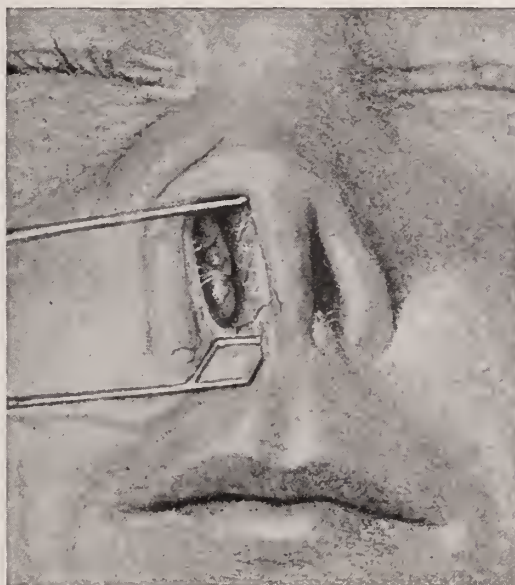


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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 57, No. 8

BOWLING GREEN, KY.

AUGUST, 1939

OUR PRESIDENT

Our President-elect who will take office in September is John W. Scott, of Lexington. This is a great source of pride to those of us who live in Fayette County and to his many friends throughout the State. We in Lexington feel that the House of Delegates has honored us by selecting Dr. Scott and that he will be an honor to the Society.

It will be of interest in this State where "blood lines" are important to know that Dr. Scott's "medical background" antedates the admission of Kentucky into the Union. A great uncle, Dr. John M. Scott, was a medical officer in the Revolution. A mortar and pestle once his now serve as a paper weight on the desk of his great great nephew.

Dr. Moses Scott, a great uncle of our President-elect, was one of Kentucky's pioneer physicians, having practiced in Lexington before 1800, and John W. Scott, the father of the subject of this sketch practiced medicine in Lexington for many years after his graduation in 1842 from the old Transylvania Medical "Academia." Dr. Scott was fortunate also in his immediate predecessors in Lexington for when he entered practice in 1898 his older half-brother, Mathew T. Scott, had been for many years the leading surgeon in Lexington and his mother's brother, Dr. Skillman, took him under his guiding hand and helped to mould the young doctor, then twenty-three, by his really extraordinary personality. Dr. Henry M. Skillman was at that time one of the two last surviving members of the family of the old Transylvania Medical School and, interesting to note, was President of the Kentucky State Medical Association at the first Bowling Green meeting of the Society in 1878.

Dr. Scott graduated from Centre College with an A. B., in 1893 and received his medical education at Columbia University, College of Physicians and Surgeons, graduating in 1896. After a two year internship in Bellevue Hospital, New York City, he returned to Lexington where he has been active in the practice of medicine since.

He was married in 1899 to Caroline Preston Thornton, of Lexington. Of their three children two are physicians.

During the World War he served in the Medical Corps, resuming his practice in Lexington in 1919.

Dr. Scott is a member of the American Medical Association, the Southern Medical Association, the Central Society for Clinical Research and a Fellow of the American College of Physicians. He is attending physician to the Good Samaritan and St. Joseph's Hospital in Lexington and is now President of the staff of the latter institution. In addition he finds time to serve as a director of the Public Health Center and as a member of the Medical Advisory Board of the Julius Marks (Tuberculosis) Sanatorium.

This sort of resume can give but a faint idea of his value to his community. Some insight may be gained by knowing that there has not been a movement for improving the practice of medicine in Lexington for twenty years in which he has not played an active and often the leading part. Prospective internes in arranging their hospital rotation always try to get on his service. There is no one who gives them as much time or who takes as much kindly interest in seeing that they are properly taught. But woe to the interne who gives him an evasive answer or lets up in his work!

An energetic and fearless honesty, a forthright and simple way of expressing himself are combined in him with a friendly willingness to accept a contradictory opinion if it is supported by convincing evidence. He is always willing to seek the cause of some difficulty in hospital relationships and to remedy it at once. How often we have heard him say "Well, we'll just go to the mat about that right now" and "to the mat" he goes, and stays there until the question is settled. With this fine tenacity goes an excellent clinical mind, and these tools, sharpened by a large experience have placed him in the front rank of the skilled workers in our profession.

It is indeed fortunate for our State that

we will have as our President for a year a man who carries within him the best of our medical heritage from the past, and who faces the troublous future with uncompromising ideals. His face is set against those mushroom schemes which lead the public to believe that the millennium is here. We may well be thankful for a leader who never leaves us in doubt as to which side of any question he is on, and whose courage will not "let us down." Such a one is John W. Scott.

Francis M. Massie.

MEET OUR VICE PRESIDENTS



J. DUFFY HANCOCK

Surgeon: Was born November 1, 1898, Jeffersonville, Ind. Son of Dr. Charles F. C. and Nora (Duffy) Hancock, was graduated from the University of Louisville in 1921, degrees B.S. and M.D. Surgical Intern, New York Post-Graduate Hospital, 1921-23.

He is Associate Clinical Professor of Surgery, U. of L., Lecturer, Nazareth College,

Louisville; Visiting Surgeon, Louisville City Hospital and St. Joseph's Infirmary; a member and past president Jefferson County Medical Society; Vice-president of Kentucky State Medical Society; Member of Southern Medical Association. Member of Southern Surgical Association; Fellow of American College of Surgeons; Past-president, Jefferson County Board of Health; Chairman State Executive Committee, American Society for the Control of Cancer; Member of Founder's Group of American Board of Surgery; Member of Louisville Society of Medicine and Louisville Surgical Society; Woodcock Medalist, University of Louisville, 1917; Member Alpha Omega Alpha and Phi Chi Medical Fraternities.

Married to Marie Elizabeth Seelbach, 1925. One daughter, Johanna.

Dr. Hancock is the author of Subphrenic Abscess, Radical Operation for Carcinoma of the Penis, Jean Paul Marat, M. D., The Diagnosis and Management of Acute Gall-Bladder Disease, Complete Inversion of the Uterus, Allergic Reaction Following Transfusion, Modern Treatment of Breast Tumors, The Irish School of Medicine, Multiple Abscesses of the Liver, Hirschsprung's Disease, Mesenteric Cysts, Intestinal Obstruction, etc.



E. L. PALMORE

Dr. Palmore is one of the best known physicians in southern Kentucky. He was born in Monroe County, September 19, 1879; attended the county schools and received his degree at Kentucky University, and after graduating he taught in the schools of Glasgow for several years. He entered Hospital College of Medicine, and graduated in the class of 1905, and located immediately in Barren County, where he has done general practice ever since. He has been a constant attendant of the state and county societies and has always taken an active part in his county society work.

J. T. MOLONEY

Dr. J. T. Moloney was born in 1901. He received his B. A. degree from St. Xavier College, Cincinnati, and was graduated from the University of Cincinnati College of Medicine in 1929. He received his internship at the St. Elizabeth's Hospital, Covington, Ky. He located in Covington afterwards and has been an active member in County and State Society.

ORATOR IN MEDICINE



EDWARD B. WILLINGHAM

Edward Burnett Willingham, born March 7, 1870, was graduated from the University of Louisville Medical School in March, 1892. He was actively engaged in general practice until July, 1917. At the outbreak of the World War he was commissioned a first lieutenant in July, 1917, and entered service in April, 1918, and was discharged in August, 1919. He returned to general practice and has had an office in the Citizens Saving Bank Building, Paducah, since that time.

ORATOR IN SURGERY



R. ARNOLD GRISWOLD

Dr. R. Arnold Griswold was born April 17, 1898, in Peru, Indiana. He received his B.A. Degree at Harvard in 1921 and his M.D. at the University of Louisville in 1925. He was instructor in Pathology at the University of Louisville in 1926 to 1927. He was Demonstrator in Surgery at Western Reserve University, 1929-32, and Associate Professor of Surgery at the U. of L. in 1932 to 1937. At the present time he is Professor and head of Surgery at the U. of L.

He belongs to the American Medical Association, American College of Surgeons, Southern Surgical Association, Southeastern Surgical Congress, American Association for Traumatic Surgery, Associate member Societe Internationale de Chirurgie, Founders Group American Board of Surgery, and is Lieutenant Commander, U. S. Naval Reserve.

GUEST SPEAKERS



LOUIS HAMMAN

Louis Hamman, M. D., was born at Baltimore, Maryland, December 21, 1877. He was graduated from the Johns Hopkins University School of Medicine in 1901, and has been an Associate Professor of Medicine in the medical school and Visiting Physician to the Johns Hopkins Hospital for many years. Dr. Hamman has been a prolific writer on diseases of the lungs and heart as well as other medical topics. He is a member of the Association of American Physicians, at the present time is Vice President, the American College of Physicians, the American Medical Association, and the American Climatological and Clinical Association.

ROGER I. LEE

Roger Irving Lee, M. D., was born at Peabody, Massachusetts, on August 12, 1881. He obtained his A. B. degree at Harvard University in 1902, and his M.D. degree at Harvard University in 1905, and has practiced medicine in Boston since that time. He was Visiting Physician, Massachusetts General Hospital, 1912-23. He has held various positions in the Department of Medicine at the Harvard Medical School. From 1904-24, he was the Henry K. Bigelow Professor of Hygiene at Harvard University. He is now Fellow of Harvard College. He is a member of the Association of American Physicians, Society Clinical Investigation, member and Regent of the American College of Physicians, member of the American Academy of Arts and Sciences, member of the Massachusetts Medical Society, Trustee and member of the American Medical Association.



DONALD GUTHRIE

Donald Guthrie, of Sayre, Pennsylvania, was born in Wilkes-Barre, June 23, 1880, and is the son of the late Dr. George W. Guthrie, who for many years was trustee of the American Medical Association.

Dr. Guthrie was graduated from Yale University of Pennsylvania School of Medicine in 1905. He served his internship in the Wilkes-Barre General Hospital and then went to the Mayo Clinic and was a member of the staff for three and one-half years. In 1910 he was elected surgeon-in-chief of the Robert Packer Hospital at Sayre, which position he holds at the present time.

In 1917 he was elected a trustee and councilor of the Pennsylvania State Medical Society from the then Eighth Councilor District, and in 1932 he was elected President. He is past president of the Bradford County Medical Society; a Fellow of the American Medical Association; a member of the Association of Resident and Ex-Resident Physicians of the Mayo Clinic, having served this latter organization also as president. He is a Fellow of the American College of Surgeons, and at the present time a member of its Board of Governors, and also a member of the Committee on Fractures and Industrial Medicine and Traumatic Surgery for the current year; a member of the Southern Surgical Society, the Surgical Research Society, the International Surgical Society, and the American Surgical Association.

In 1934 he was made an honorary fellow of the Royal Academy of Medicine of Rome, and in 1938 was elected a member of the Royal Hungarian Medical Society.

In conferring the honorary degree of Doctor of Science on Dr. Guthrie in 1936, Lafayette College declared he had "shown a keen interest in postgraduate medical seminars instituted under his term as President of the

State Society in 1933." It also characterized him as a skilled surgeon; friend and teacher of his fellow doctors; a distinguished member of the profession to which he belongs."

In 1938, Dr. Guthrie was appointed Associate Professor of Surgery of the graduate School of Medicine of the University of Pennsylvania. He has contributed largely to medical and surgical literature.



MILTON B. COHEN

Dr. Milton B. Cohen was born in Madison, Indiana, May 17, 1894. He attended the U. S. Naval Academy in 1910-11 and the University of Louisville Medical Department 1911-15, receiving his M. D. from the University of Louisville in 1915. Served internship in the Louisville City Hospital as Resident in Pathology. He was City Bacteriologist in the Cincinnati General Hospital, and at the Evacuation Hospital 14, City of Cincinnati. He was with the Central Laboratories of the A. E. F. doing general practice in 1919-21, after which he was Pathologist to St. Alexis Hospital, Cleveland, Ohio, 1921-1923. Since that date he has limited his practice to internal medicine and Allergy. He is visiting Allergist to St. Alexis Hospital. He is Director of the Asthma, Hay Fever and Allergy Foundation, Cleveland, Ohio, and is certified by the American Board of Internal Medicine.

He is a member of American College of Physicians, Society for Experimental Biology and Medicine, American Association of Immunologists, Past President Society for the Study of Asthma and Allied Conditions, and is Vice President of American Association for the Study of Allergy.

OUR TREASURER



AMPLIAS W. DAVIS

Dr. A. W. Davis, Madisonville, was graduated from Louisville Medical College in 1898. After serving internship in Louisville he attended clinics in London, Edinburgh, and Dublin. Returning to America he enrolled in the New York Post Graduate College and later attended post graduate clinics at Tulane University. He was Captain of the Medical Corps of the U.S. Army from February, 1918 to May, 1919, and Lieutenant Colonel of the Medical Corps Reserve. He was Surgeon for St. Bernard Mining Company from 1899 to 1918, and is now Surgeon for the Illinois Central R. R.

He was elected Treasurer to fill out the unexpired term of the late Dr. Marshall McDowell.

THE ANNUAL MEETING AT
BOWLING GREEN

Bowling Green, the county seat of Warren County, is located in the south central part of Kentucky. It is on Highway 31-W and on the main line of the L. & N. Railroad 114 miles south of Louisville, 65 miles north of Nashville, and 40 miles from Mammoth Cave (19 miles from Mammoth Cave area). Located on Barren River at the head of navigation, it is 189 miles by water to the Ohio River and 75 miles to Mammoth Cave.

Bowling Green has a background rich in historical data. Warren County was formed from Logan County March 1, 1797, and Bowling Green was established January 2, 1798. Tradition says the city got its name from the fact that Robert Moore, one of the two Moores who gave the land on which the town was built, had a bowling alley on the greens in the rear of his home, and the settlers enjoyed the game of bowling-on-the-green. It was located on the old Cumberland Trace, and the old taverns were the principal stopping places for the stage-coach lines.

Bowling Green was a strategic point during the Civil War, and forts were erected on the three outstanding hills. On the highest of these, Fort Albert Sidney Johnston,



HENRY HARDIN CHERRY HALL

The Newest Building On College Heights, Costing \$620,000. One of the Show Places On the Hill.

is now located Western Teachers College, where the State Medical Association will hold its convention.

Western is known far and wide for its beautiful campus and its outstanding record as an institution of higher learning. The college is situated less than a mile from the heart of the city. Western is one of the largest teachers colleges in America, having an annual enrollment of approximately 4,000 different students. The college and its predecessors, the Southern Normal School and the Bowling Green Business University and the Western Kentucky State Normal School, have enjoyed an unbroken record of distinguished service to education for forty-seven years.

Practically all the Christian denominations are represented in Bowling Green. Their churches are of outstanding architectural beauty, some of the ante-bellum age, others modern style. The cultural and progressive spirit is expressed also in the number of organized clubs, civic, literary, and social. Kiwanis International, The Lions and Rotary International have active clubs in Bowling Green, and there is a well-organized Chamber of Commerce. There are several federated women's clubs, a number of men's literary clubs, a golf and country club, and a municipal golf club.

The schools and colleges are among the city's most outstanding assets. The public school system of the city and county is one of the strongest in the state, and there is an excellent Catholic parochial school.

The Bowling Green Business University, one of the largest institutions of its kind in the world, is an accredited college in the field of business, with an annual enrollment of between 1,100 and 1,200. These students come from practically every state in the Union and from several foreign countries.

While Bowling Green's outstanding feature is its educational institutions, the resources and industries are quite extensive. It is located in one of the richest agricultural and live-stock sections of the state, with tobacco the principal crop. The soil and climate are adapted to a wide variety of farm products, and the county has rapidly grown to be a recognized stock-selling center. The mineral resources are plentiful. The limestone is suited for highway and road-bed construction. Kentucky Rock Asphalt, mined close by, is used for topping purposes and is brought into Bowling Green by barge on Barren River and shipped by rail to all sections of the county for road building. Bowling Green stone is famed throughout the United States as one of the best for

building purposes, and many of the handsomest structures in the nation are built of it. There is a large milk condensary located in Bowling Green, an axe-handle factory, a tobacco manufacturing plant, and flour mills. Bowling Green has two daily newspapers. The hotels are excellent, and in number and size well adapted to care for the extensive tourist patronage. There is a city hospital well equipped and competently managed, with a splendid staff of physicians and nurses.

Recreation is provided along every line. Known as the Park City, Bowling Green has deserved the title by having within its jurisdiction any number of parks under the direction of a Park Planning Board. The one located in the middle of the public square adds to the beauty of the business section. Reservoir Park, the new Municipal Park and Golf Links, and the Bowling Green Golf and Country Club provide all manner of recreation in the way of golf, tennis, swimming, boating etc. and the colleges and schools provide football, baseball, tennis, and basketball schedules. The streams of the county abound in fish, and the hunting is excellent. The close proximity to Mammoth Cave National Park is a great asset to the city.

Bowling Green's growth has been constant since the early days, and the citizens, conservative at all times, have been progressive in establishing a city of the best type of culture and citizenship.



ADMINISTRATION BUILDING

Western State Teachers College, Where the President's Address Will Be Delivered



WEST HALL

Girls' Dormitory of Western Teachers College Where the Woman's Auxiliary Will Hold Its Sessions

VISIT MAMMOTH CAVE

Kentucky's Wonder of the World, the famous Mammoth Cave, is only 30 miles from Bowling Green, and a post convention tour at attractive special rates has been arranged for those who want to enjoy a week-end in one of the most beautiful National parks in America. The hotel and cottages are situated in a pioneer forest, the food is delightful and plentiful and the rates very moderate. Details for reservations will be available at the registration booth.

Make your plans in advance so that at the close of the meeting you can spend an enjoyable week-end at the Mammoth Cave.

ENTERTAINMENTS

Many entertainments have been featured by the Warren County Medical Society for the Annual meeting of the Kentucky State Medical Association. There will be a golf tournament at the Country Club and the play for trophies will be on Sunday and Monday. Also a Burgoo at the Municipal Park is on Tuesday, and a get together party as you go dinner Wednesday night for the entire membership, at the College. On Wednesday morning, Dr. John H. Blackburn, past president of the Association, will entertain

the Past Presidents at a breakfast at the Helm Hotel. A turkey shoot has been planned for Monday and there will be several social get-togethers after each meeting.

A luncheon for the ladies will be given at the Country Club, with special guest speakers, and they will also be entertained with a tea by Mrs. John Blackburn at her home on Main street. Sight seeing tours to local points of interest are also arranged.

ACCOMMODATIONS AT BOWLING GREEN

Arrangements are practically complete for the interesting annual session at the Western Kentucky State Teachers' College at Bowling Green, Ky.

Rooms in the entire West Hall Dormitory have been reserved for the members and their families at a rate of \$1 per day. These are large, spacious, airy rooms with twin Simmons beds and a connecting bath. There are no single rooms. Meals will be served at the splendid college cafeteria. Breakfast will cost 50c, lunch 75c, and dinner \$1.00.

For reservations, write to Dr. G. Y. Graves, Chairman Hotel Committee, Bowling Green.

West Hall is a large stone building situated between the President's home and the Stadium. Ample parking space is available near the Dormitory.

TESTIMONY OF DR. A. T. McCORMACK
BEFORE THE SENATE COMMITTEE
ON EDUCATION AND LABOR
CONCERNING THE WAGNER
HEALTH BILL

In the Journal of the American Medical Association recently, what purported to be a condensed statement of my evidence at the hearing on the Wagner Health Bill before the Senate Committee on Education and Labor, was printed. This garbled, misconstruction of what I said will be apparent to everyone who reads the following, which is a copy of what I really did say.

STATEMENT OF DR. A. T. McCORMACK
STATE HEALTH COMMISSIONER,
LOUISVILLE, KENTUCKY

DR. McCORMACK: Mr. Chairman and gentlemen. I should first like to present a resolution which was unanimously adopted by the Conference of State and Provincial Health Authorities of North America, with the footnote "as this resolution refers to legislation affecting the United States, the provincial representatives present were excused from voting." The resolution is as follows:

WHEREAS, the Interdepartmental Committee to Coordinate Health and Welfare Activities has submitted to the Congress and the country a national health program; and

WHEREAS, the House of Delegates of the American Medical Association, representing the physicians of this Nation, unanimously resolved that "very definite and decisive action (on the program) should be taken now"; and

WHEREAS, legislation has been introduced into the Congress implementing this program: Now, therefore be it

RESOLVED BY THE CONFERENCE OF STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA.

I That we urge the passage of legislation making effective recommendations I, II, III, and V of the national health program as follows:

1. The general principles outlined by the Technical Committee for the expansion of general public health and maternal and child health service are approved, with the provision that the expansion of public health and maternal and child health service should not include the treatment of disease except when it is determined in any State, or

subdivision of a State, that this cannot be successfully accomplished through private practitioners.

2. That we favor the expansion of general hospital facilities and of special hospitals for tuberculosis and mental diseases in any State or any subdivision of a State where actual studies show that a need exists, and where such additional facilities can be assured of adequate staffs and maintenance.

3. That we approve the principle that complete medical care of the indigent is a joint responsibility of local governments and the medical and allied professions, and should be supported by tax funds. Since the indigents and the medically indigent now constitute a large group in the population, we recognize that State aid for medical care may arise in any community and that supplementary Federal funds must be provided so that this group of people will receive a good quality of medical care. We wish to emphasize the importance of a far-reaching program for public health education of all the people in order that they may take advantage of the good medical service now available, or which is to be made available. We favor this expansion of the public health program providing medical care for the medically needy, because it has been approved by the American Medical Association representing the practicing physicians of the country. We especially approve the continuation of the principle which has been developed by Federal public health agencies "that the role of the Federal Government should be principally that of giving financial and technical aid to the States (where needed) in their development of sound programs through procedures largely of their own choice."

4. That we approve the extension of unemployment insurance for compensation for loss of wages due to illness, with the provision that the attending physician be relieved of the duty of certification of illness and recovery, which function should be performed by a qualified medical employee of the disbursing agency.

II. That we oppose the enactment of any laws encouraging or aiding so-called compulsory health insurance at either Federal or State levels as impractical of administration, extrava-

gant and as providing illusory and increasingly expensive costs of medical care while lowering its quality, and as opposed to the American system of government and economics.

III. That we approve the spirit of the recent Federal Reorganization Act and urge upon the President and the Congress that all Federal public health agencies be administered through a national department of health, and that, pending such establishment, Federal health agencies be assembled in, and administered by a division of an existing department or other Federal agency, and we especially object to the assignment of any new or existing public health function to any bureau or board not now administering such functions, because this would necessarily result in uneconomic duplication, complication, and confusion in public health administration.

Mr. Chairman, this resolution, I will say, was adopted prior to the recent meeting of the American Medical Association, and in accordance with our understanding of the recommendations they had previously made and which, in principle, are re-affirmed with additional reservations in the action of the House of Delegates in St. Louis the other day.

You know, we doctors have the reputation of disagreeing. As a matter of fact, we do not. It sounds like we are disagreeing, when we really mean the same thing, as has been brought out in the testimony of practically everyone who has spoken here today. We have the same objectives in view all the time, viz: the protection of the public health, the prevention of disease and the provision of good medical care for all who need it. Since we have the same purposes as the distinguished author of this bill and as this Committee, and as we differ about methods, we feel our opinion will have weight with your committee, as it always has had. In the formulation of such legislation as this, it is important to keep in mind that while every citizen is interested in the prevention and cure of disease, there is but one group qualified to provide either. That is the medical and associated professions. For this reason, we feel that you will welcome our advice as to administrative technique.

I had the privilege of cooperating with Senator Wagner and his associates in the passage of health titles of the original social security bill.

I am very happy to be able to report to

this committee that in the operations of titles V and VI, there has been, and can be, no adverse criticism, no criticism that is justifiable, and there has been none from any responsible authority. The reason for that is perfectly simple.

Now, in regard to the Children's Bureau and the Public Health Service; of course, in principle, there ought never to have been health activities assigned to the Children's Bureau; but because of our ineptitude in leadership at the time it was so assigned, those of us who were interested in public health declined to do anything in the matter of child and maternal health, Congress very wisely took the matter out of our hands and authorized the Children's Bureau to do what we were declining to do. The Children's Bureau has continued its work so well that there are two Federal Bureaus that have mainly to do with public health. In regard to the cooperation with the States with both of them and each of them, there has never been the slightest intimation of coercion, or an imposed control at any time in any State.

The State health authorities through the local agencies in the State, originate the plans. They develop them. As a rule, they are accepted without change or amendment by the Federal authorities because they recognize that those charged with the responsibility for the actual administration of so important a function as the protection of the public health are not going to attempt to do, by and large, a foolish thing. In the well organized States, that is always the case. In some of the States, where unfortunately there is some political manipulation in regard to the State health department, that confidence does not exist, and yet even in those States the cooperation between their medical profession and the State health department has been continuous and satisfactory in almost every State in the Union.

There had been no conflict in regard to any of the provisions or activities under title V or title VI of this act. Those provisions were not adopted like Venus was born, out of the ocean all ready to work her various charms. They were developed from infancy through childhood to their present encouraging adolescence.

To the Public Health Service in 1912 an appropriation of \$50,000 was made for the investigation and demonstration of methods of rural health and administration. That appropriation varied from \$50,000 to \$75,000 for a long time, up to the passage of the Social Security Act. It was wisely expended, in a few localities, for developing sound pro-

cedures that would meet with the approval of the organized profession and would win the confidence of the public and the approval of those who were qualified to speak.

The development of health work, as the development of any specialty depends on the ability to secure the trained personnel who can readily qualify to do this job. I am a practicing physician and I am a health officer too. I am a specialist in public health and practice that specialty, but I am no less a physician because I am a health officer.

In Kentucky, we have the advantage—and I think it is a very great advantage—that the State health department is a creature of the State medical association. I am selected by a board which is selected by the State medical association.

SENATOR ELLENDER: That is by statute?

DR. McCORMACK: That is by statute. All of our policies are provided for us by the house of delegates of the State Medical Association of Kentucky, which, therefore, has the responsibility not only for the treatment of disease in their individual capacity but for the prevention of disease and for public health education, and every procedure that has been adopted in Kentucky has the unanimous approval, and has had for many years, of the Kentucky State Medical Association. There can be no division of opinion between the State health department and the State medical association, because if there should be, they would just get rid of us, that is all, and the opinion would still be unanimous.

To show you that that works rather well, my father and myself are the only two State health commissioners that Kentucky has had since 1879 when the State health department was created. It just happened that after they had my father as long as they did, they took me, and we have had, therefore, a very happy association with this public health movement.

I am a member in practically every organization that has testified here. I am a member of the Federated Women's Clubs, in my wife's name, and the Federated Women's Clubs in Kentucky are quite as important to us in the promotion of public health education and public health procedures as any other organization in the State, including the State legislature, because they have to do with public opinion. Women bear the babies, they nurse the men when they are sick, they bear the burden of illness, and, therefore, they have a right to speak on matters of such moment to them as this, and we have listened to them and have had their support constantly.

I am a member of the Farm Bureau. I realize that the provision of good health and medical care for the farm family is one of the most important of our problems. I have a farm. I have a little landing place whenever they decide they want some other health officer.

I am an honorary member of one of the great labor organizations. I belong to everything that has to do with public health and public opinion in the Commonwealth of Kentucky.

SENATOR ELLENDER: Any political organization?

DR. McCORMACK: I have never been in a political committee, nor at a political convention, since I have been State health officer.

SENATOR ELLENDER: Doctor, let me ask you this question: Do you find that because of the fact that the Kentucky statute provides that the medical association names the health officer, that that has a tendency of keeping public health out of politics?

DR. McCORMACK: It does. On two occasions very partisan governors—one a Democrat, the other a Republican, thinking they saw political advantage in seizing the patronage of the health department, attempted to take its control from the medical profession but an aroused and outraged public opinion prevailed and these attempts were defeated.

The State health department is the one agency in the government of Kentucky in which there has never been the slightest intimation of political control. I get letters of recommendations from governors in regard to appointments, and they always write in the letter without a single exception since I have been State health commissioner, that this man is a good Democrat, or a good Republican, as the case may be, and "I would like very much to see him given a position, if he is fit to have a position" but we have a merit system, he has to show he is capable of doing the job. We do not object to a man simply because he is recommended by a politician. I have had many years of experience with politicians and have found them rather more interested in good public service than less experienced citizens, but we examine the man recommended, just the same.

SENATOR ELLENDER: What has the medical society to do with those appointments?

DR. McCORMACK: Nothing. They have nothing to do with that. I make the appointments and the State board of health confirms them and the members of the State

board of health are selected by the medical association.

SENATOR WAGNER: They have veto power?

DR. McCORMACK: Yes.

SENATOR WAGNER: I might say in New York we have developed a system of commissioners, and I think it is a pretty good system.

DR. McCORMACK: I have had the privilege sir, of being at Saratoga Springs at the last three of your public health meetings. There is no other State, and, of course, there could be no other State, in which there has been greater development in public health, or public welfare, than the great Empire State. It is the leader of the Nation in all these respects. We bow to you. You have enough money to employ the best brains. We have to use what brains we have because we do have very little money.

SENATOR ELLENDER: Doctor, you stated a while ago, I believe, that you were familiar with the way that social security was handled in other States.

DR. McCORMACK: Yes, sir.

SENATOR ELLENDER: Do the plans in the various states differ any?

DR. McCORMACK: They differ just as distinctly as the faces of the members of this committee differ. It would be idle to say that in Maine they would have a malaria program, while in your State and mine we would have a program to prevent and control pellagra. It would be ridiculous to have such an extensive program in the State of New York.

SENATOR ELLENDER: So it is possible for each State to easily work out its program, irrespective of what the other States do?

DR. McCORMACK: Not only each State but each county in each State. In Kentucky, we have 120 counties and 86 of them have full-time health departments.

SENATOR ELLENDER: You found the attitude of the Health Service here at Washington to be cooperative, as you said, and there is no effort made on its part to try to make you adopt this plan or that plan because the other State has it?

DR. McCORMACK: There has never been any such suggestion. Not only has there never been such suggestion but no officer of the Public Health Service has come into the State of Kentucky, except at my invitation since I have been State health commissioner.

SENATOR ELLENDER: All right.

DR. McCORMACK: The same is true of the Children's Bureau. No suggestion has come from them as to any change in plans, al-

though on many occasions I have called distinguished officers of the Service, having special qualifications, with the consent of the Surgeon General, or the Chief of the Children's Bureau, in consultation and have received most valuable advice from the great men who compose that Service and that Bureau.

Mr. Chairman, in the great constructive report of the Technical Committee on a National Health Program, those who composed it, with the approval of the Interdepartmental Committee to Coordinate Federal Activities, said distinctly that it was not practicable to put into effect immediately its maximum recommendations. It contemplated a gradual extension along well planned lines with a view toward achieving operations on a full scale within ten years.

In the actual drafting of S. 1620 by the several interests involved in it, this wise vision of the Technical Committee was largely overlooked and an attempt has been made to provide for and authorize, not only all that was contemplated by the Committee over a period of years, but to make the authorization so unlimited that it would not be necessary to come back to the Congress so we would be under its continuous scrutiny and so we could have your sympathetic reconsideration of our problem at reasonable intervals. The Committee stated that progress in the protection of the public health should be developed by evolutionary methods; it is our fear that this bill proposes to do this too suddenly, too rapidly and by methods too complicated and revolutionary.

I think the report of the Technical Committee presents one of the greatest programs on social welfare in the history of mankind. Of course, I do not agree with all of its recommendations but one thing impresses me more than any other, and my experience makes me feel that it is one your Committee would want to make definite in the final drafting of legislation to effectuate its purposes, and that is that the approach be gradual—step by step.

Mr. Chairman, we who are to administer the law, the medical and allied professions who are to render the service under the local control provided by it, should not be required too suddenly to undertake something which we know cannot be accomplished. We have before us the example of the NRA. The administration would not have broken down had it not been too inclusive; the ideals and its purposes were as admirable as the pending legislation, but, it provided an administrative impossibility.

While similar, or greater progress has been made in other states, I believe it will interest the Committee, for a moment, to review the action of the Kentucky State Medical Association in regard to the problem presented in the National Health Program. We had developed the first full-time health department in the United States in 1907, in Jefferson County, outside of the city of Louisville. With the financial assistance of the Rockefeller Commission for the Eradication of Hookworm Disease, we had found more than four hundred thousand persons in Kentucky having this one disease, the existence of which we had not even suspected in the State before that time. As we came in contact with our people in this campaign, we were forced to realize their public health and medical needs. The Kentucky State Medical Association had a special meeting at Lexington as far back as 1912 to consider this very subject; every session since has devoted a large part of its time to these problems. In 1918 our legislature authorized the development of full time county health departments and provided State aid for their maintenance. Since 1918, such full-time health departments have been developed in 86 of our 120 counties, and 16 additional counties have already authorized their creation but we cannot make these expansions because the State is not able to provide its portion of the needed money.

During this period of years, we have had great difficulty in securing the increasing large number of qualified medical specialists in public health, public health nurses, sanitary engineers and laboratory workers required in these 86 departments. In fact, Mr. Chairman, we realize that, with all the progress we have made, and with all the additional protection we are giving our people, we have only built the foundation on which future public health and medical service will develop. Our laws and our regulations prohibit our health officers from engaging in the practice of medicine, other than the specialty of public health. We had never even considered extending public health activities into the field of treatment of disease amongst the indigent until this plan had been approved by the Special Session of the House of Delegates of the American Medical Association last year. I hope very much, Gentlemen, that you will amend that feature of the bill which requires that services under its different titles should be made State-wide, or extend to all political subdivisions before 1945. From my experience, I do not think the service should be extended

to any county or political subdivision until the medical profession and the people and the governing authorities of that particular county desire that such service be rendered in their jurisdiction. You cannot impose a service on a people who do not want it.

Professional and public approval is not difficult to secure for a sound program, but no program can be developed without both. The distinguished author of the bill and the members of this Committee have been so sympathetic in their repeated expressions at these hearings of their desire for the advice and cooperation of the medical profession in perfecting the bill, that it is a real pleasure to contribute to that mutual understanding which will make its success possible.

As one somewhat experienced in legislative methods, it seems apparent to me that this bill presents one extreme in attempting to attain its objectives and those who have raised objections to it, have gone their limit toward the other extreme; both, however, are united in a desire to obtain the objectives of the National Health Program. The two groups are travelling on parallel tracks and it is only necessary for them to get together on the method of arriving at their objectives.

Please keep in mind that it is the purpose of the medical profession to prevent disease, and to arrest, cure or ameliorate, when it cannot be prevented. Having that purpose and you, as representatives of the people, having the desire to fulfill that purpose, we need to develop administrative methods that will, without destroying any of the good that has made public health and medical service in the United States the best in the world, add to it those things that will make it still better.

To secure the most practical and economical administration and service in this legislation, I know is your objective. That is always the objective up here, and has been before every committee that I have appeared. I have had the privilege of appearing before these great committees for many years and I never appear that I am not profoundly grateful that I am a citizen of the United States. I think the way legislation is introduced and perfected and passed in this Government is the greatest tribute to the American system of government that there is. It is always a joy to come before your committee, because I have always found that one or two of you who have been particularly interested in it know more about the subject than I do, and I have learned a great

deal from appearing before the committees in the administration of my problems in Kentucky.

SENATOR ELLENDER: Doctor, I believe I would vote for you for health officer. (Laughter)

DR. McCORMACK: Thank you very much, sir. Our motto is "We want a league, offensive and defensive with every well wisher of Kentucky and her people." You qualify I am sure, Senator.

I want to take your time just to read one incident, because I think it has a bearing on this. This was published in our last issue of our medical journal in regard to the action of the State Health Department of Kentucky.

Last year the Kentucky State Medical Association acting under request from the American Medical Association, established a committee on the study and provision of medical care. This committee has had the active cooperation of many of our physicians, dentists, pharmacists and county officials, and has enabled us to tabulate many of the inequalities and failures of distribution of medical service in such a way as to indicate that serious planning must be undertaken to solve the problems which have arisen. In addition to plans for medical service for the indigent in the cities maintaining public hospitals, experimental plans have been inaugurated, and are now successfully operated, in Fayette, Mercer, Kenton, and Jefferson counties.

Several other counties have been added since that time. The study has made it evident that the greater part of the burden of medical care in all of our poorer counties, and in most of our other counties, has been carried, as it always has been, on the shoulders of the medical profession.

In many of the counties of Kentucky there is not one nickel of public funds spent for medical care for anybody. They are not able to do it and have never done it.

It is becoming increasingly evident that this burden is becoming too great for the profession to carry alone, and that it must be shared, philanthropically, in this respect with the public.

The following resolution was passed at the meeting of the Council of the State Medical Association:

Whereas, the Council of the Kentucky State Medical Association—

And any action in Kentucky by the State

Health Department is predicated on previous action approved by the Council of the State Medical Association:

Whereas, the Council of the Kentucky State Medical Association has unanimously requested the State Department of Health to petition the Governor for his approval for the establishment of a bureau of medical service in the division of local health work for the State Department of Health, and has nominated Dr. John B. Floyd of Richmond, Kentucky, as the Director of said Bureau when created; and

Whereas, under section 2054, subsection G, Kentucky Statutes, there is provided as follows:

That in addition to the bureaus already established by law, the State Board of Health is hereby authorized to create and maintain other bureaus, and in the rules and regulations which they are now authorized by law to make and promulgate, to provide for their effective operation. The board shall have authority, with the approval of the Governor, to rearrange or discontinue any such bureaus, or to create new ones in the interest of efficiency and economy in conducting its work: Now therefore be it

RESOLVED, That the State Board of Health of Kentucky hereby authorizes the creation of the bureau of medical service in the division of local health work of the State Department of Health whose duties shall be to assist the legally qualified and registered medical profession of Kentucky in providing complete service for the indigent and the medically indigent residents of the Commonwealth.

The Council of the Kentucky State Medical Association shall advise and cooperate with the board in the formulation of plans and rules and regulations for making the work of this bureau effective for the protection of the health and lives of the residents of the State, and shall assist the registered profession in every county in the State in the formulation of plans for the purposes herein provided: PROVIDED, That all plans formulated for any county shall provide for absolute freedom of choice of the legally qualified physician who shall serve them from all those qualified to practice who are willing to give service: AND PROVIDED FURTHER, That there shall be no restrictions

on prescription or treatment except such as are necessary for the protection of the public health; AND PROVIDED FURTHER, That any expenditures made for the expansion of public health and maternal and child health services should not include the treatment of disease except so far as this cannot be successfully accomplished through the legally registered practitioner; AND PROVIDED FURTHER, That a person is medically indigent when he is unable, in the place in which he resides, through his own resources, to provide himself and his dependents with proper medical, dental, nursing, hospital, pharmaceutical and therapeutic appliances and care without depriving himself or his dependents of necessary food, clothing, shelter, and similar necessities of life, as determined by the local authority charged with the duty of dispensing relief for the medically indigent.

Now, Mr. Chairman, in consideration of this specific legislation, there are three major objections that we would like to offer for which we would like to suggest amendment to the bill. The first is that there are three fathers through which the States must make their Federal approach. Now, we should have either a department of health, or a Federal health agency, in which all Federal health and medical bureaus should be assembled which would pass on all plans instead of having to make the plans multiple and have each one find out for himself what is being done by or in the other service. It is an idle thing to think of Bill Jones out here on the creek having syphilis and his wife being pregnant, one of his children being sick with an acute disease and another one a crippled child, his grandfather paralyzed and his grandmother insane, and each of those being operated under a plan that has been formulated by the State Department of Health of Kentucky, through which a multiple lot of bills would come up. It would be almost impossible to prevent confusion and duplication and a crossing of funds under such circumstances. We could not and should not send 12 or 15 doctors to that one family. In many of our families, we have that many people in the family, because we are still increasing the number of babies in Kentucky; our birth rate is rising instead of falling; we are that prosperous, anyway, in that respect, and we are helping to create today, as we have in the past. We have had 135 Governors of other states born in Kentucky.

SENATOR ELLENDER: Is that increase in birth rate due to prosperity, do you think?

DR. McCORMACK: I do not think so. I think it is a lack of other form of recreation probably. (Laughter)

SENATOR ELLENDER: Seriously, Doctor.

DR. McCORMACK: Seriously, Senator, our people are a homogenous stock—almost all from the British Islands originally. In times of stress, such as war or depression or great expansion, such a people take their responsibility for the reproduction of man-power seriously. In times like these, our people feel that the world needs more Kentuckians.

The Children's Bureau and Public Health Service are already in existence but there is no excuse for creating medical and health functions for an additional social agency for the control of any part of this program and that title of the bill should certainly be amended.

In regard to the hospitals; the first hospital need, of course, is for the utilization of existing hospital facilities, and for a sound loan policy for the addition of ward beds to them to be utilized by those receiving hospital service and medical care under Title XIII. A liberal policy of cooperation should be arranged with the great philanthropic and church hospitals that have added so much luster to American medicine and have been so serviceable to the American people. I think it could be easily provided for by providing that the State plan for the construction of additional hospitals should show that existing hospitals in that vicinity are having all their beds utilized and cannot be economically expanded to care for the additional load. No additional hospitals should be developed in any area unless need is shown, in the first place, as the bill provides, and in addition to that they should not be constructed unless existing hospital facilities are being utilized. Fifty seven per cent of the hospital beds in Kentucky were occupied on the average, in the last two years. The reason all the others are not occupied is because our people are not able to pay the bill. That is one of the reasons we have become so interested in the provision for aid for medical care for the indigent particularly.

A notable example is the chain of Shrine Hospitals for the care of crippled children; it would be a disaster to lose the intelligent and sympathetic support of this great organization by adding public institutions in competition with them. By some legislative device, their facilities should be extended. This crippled children's problem splendidly illustrates its defects. In Kentucky, we have 257 beds available for crippled children. The Commission's income is insufficient to

enable even these few beds to be filled. On our waiting list today there are 3,829 new cases needing orthopedic treatment. Not one of these has received any type of treatment, or any hospitalization. During 1938, we provided treatment for 1,161 individual cases, with an average of 145 per month at a per capita cost of \$146.78. If sufficient funds were available, (they cannot be secured from the State during the Fiscal year ending June 30, 1940) we would be able to hospitalize 147 more cases each month than at the present time and we would also be able to at least double the number of cases for whom orthopedic and other services can be provided without hospitalization. The cost of treating this number of additional children would be \$320,567.52. The facilities for these treatments are already in existence. Without treatment, many of these cases will remain permanent cripples and public charges throughout their lives.

The definition of a hospital in Title XII in section 1209, is fantastic and indefinite and I would recommend its deletion.

Provision might well be made for assistance where need exists in the erection of offices for the local health departments. We have been able to build only a few in Kentucky at a cost varying from five to fifty thousand dollars each and they have practically doubled the efficiency of the health departments which have them.

SENATOR WAGNER: Do you see any difficulty in amending this particular bill as you suggest?

DR. McCORMACK: Not at all.

SENATOR WAGNER: I could not understand, although I have been a legislator for many years, the attitude of many men, for whom I have a high regard, that there is just no way to amend it.

DR. McCORMACK: Of course, being familiar with the procedure somewhat that is absolutely inconceivable to me. I can understand perfectly well a man being so thoroughly opposed to a particular piece of legislation that he can only amend by offering an inoperable substitute, hoping to delay or defeat the entire proposal.

The third main objection to the Wagner Act is that it does not provide a ceiling for the authorization for appropriations after the third year but authorizes the expenditure of as much as is necessary.

I am one who believes that executive and administrative agencies should come back to the Congress as authoritative representatives of public opinion for renewals of au-

thorization for appropriations at intervals of at least five years. Such a check on expenditures and activities prevents extravagance and limits the executive agency to service which Congress intends them to develop. It is perfectly apparent to the informed reader of the National Health Program that the limit on authorization for appropriations would not include any federal subsidy for compulsory health insurance. We approve that attitude on the part of the Technical Committee and I think we should say so in definite terms.

If you will permit me just a second, I have drawn a suggested preamble to this bill. It contains statements that have been made by its author and by the technical committee, expressing the legislative intent in its enactment that I believe would answer much of the criticism and quell much of the anxiety on the part of those who are naturally interested in continuing to do these things the way they have been doing them, and who do not want to be too much interfered with in doing them. In other words, they very properly and sincerely say "Vital statistics prove that we have the best health and medical services in the world. We want to make these much better, but we want to use methods of proven worth and progress by evolution rather than be confused by revolution."

I think it can be stated specifically in a very few words.

That this Act may be cited as the National Health Act of 1939, and that it is enacted with the intent that the role of the Federal Government shall be principally that of giving financial and technical aid where needed to the States in their development of sound programs through procedures largely of

their own choice; that it shall not be construed so as to interfere with the operation of the medical practice acts of the several States—

Of course I do not want you to think anybody could possibly reasonably construe that it could so do; but if you state that it does not, then you are answering an objection that has been raised so frequently.

and it is the express purpose of the Act that no plan approved under it shall provide for the regimentation, federalization, or socialization of the practice of medicine and that it is its express intent to provide for the continuation of the private practice of medicine which has brought to the people of the several states the benefits of scientific research and medical care.

I do not think there is any statement made there that I am not quoting either from the Technical Committee or that does not meet with your approval. I think that covers it.

Its adoption by the Congress would lay every ghost and destroy every bogie and scarecrow that has been so skilfully developed against the sound parts of this Program. Please do not misunderstand this statement. In my opinion, the enactment of the present text of S. 1620 would do more harm than good. However, I am not alarmed about that for I am confident that these hearings are developing its defects so clearly that the great Committee will be able to clarify its provisions so as to secure a start on a National Health Program that the succeeding Congresses may develop so as to secure for all of the people of our country, all of the benefits of medical science.

Now, after the meeting of the American Medical Association, which I attended and where I participated in the discussion, I tried to reach—

SENATOR ELLENDER (interposing): You mean at St. Louis?

DR. McCORMACK: At St. Louis. I tried to reach a suggested plan for so amending the act as to conform to the principles both of the National Health Program and of the St. Louis resolutions, and in that respect, I would like to read you just a paragraph:

For the purpose of assisting States, counties, health districts and other political sub-divisions of States, where needed, in establishing and maintaining adequate services, supplies, and facilities for promoting the health of mothers and children; and to develop more effective measures for carrying out the purposes of this part of this title, including the training of personnel—

I would like to pause there just a minute, Mr. Chairman, to say that this matter of training personnel has been so completely misconstrued that it is astonishing, because we have been having the experience, since 1935, of training personnel. What we do now in getting health officers; we get a doctor who is qualified to practice medicine; we send him to the training center at Lexington; he stays there 3 months. If he wants to go on to be a health officer, and we find he is qualified to become one, we then put him out in one of the health departments under the supervision of an experienced health officer for a year or two years. If he still shows he is the right sort, and he is going to get there we then give him a fellowship at Yale University or at Har-

vard, or at Johns Hopkins, or Michigan, where he goes for a year and takes a post-graduate course. There is absolutely no control of medical education; there is no thought of such a thing.

SENATOR ELLENDER: How are the expenses borne?

DR. McCORMACK: We pay a stipend of \$125 a month to the man while he is attending the course for a year, and then he comes back and stays with us for at least five years. If he leaves before the five years he pays us back whatever percentage of the scholarship has not been used for Kentucky. There should be no possible objection to that and it cannot have a thing to do with the control of medical or any other kind of education on the face of heaven and earth. It is just a scarecrow without anything in it.

SENATOR WAGNER: You are shocking one of the witnesses, who said that there ought not to be any subsidies for medical education.

DR. McCORMACK: That is not a subsidy for medical education, that is the State of Kentucky investing in improving a human machine that can save human lives. We are reconditioning that man's mind and giving him the mental armament with which to serve our people. We are not giving anything to Johns Hopkins; we are not controlling them.

SENATOR WAGNER: I am in accord with that view. I think it is a proper expenditure.

DR. McCORMACK: It is absolutely a proper expenditure.

SENATOR WAGNER: I do not understand the attitude of these other gentlemen in regard to it.

DR. McCORMACK: I do not understand it either; they must not be acquainted with the procedure which has been operating so successfully. My proposed substitute further states:

The sums authorized under this section shall be used for making payments to States which have submitted proof that need exists for extending and improving such services, and State plans for so extending and improving them, approved by the council on public health needs and plans as hereby created, and hereinafter referred to as the Public Health Council.

Now, Mr. Chairman, the rest of the bill follows very closely the provisions at present.

SENATOR ELLENDER: Will you file that?

DR. McCORMACK: Yes, I would be glad to file it with the committee.

(The document referred to was filed with the committee).

DR. McCORMACK: It is just a draft of the first section because I did not have time to even write a rough draft of anything else. If a council is formed consisting of the Surgeon General, the Chief of the Children's Bureau, a representative of the State health authorities, a representative from the American Hospital Association, the American Medical Association and the American Public Health Association, six members, that hears these plans and digests them, then the whole administration would be under the Chief of the Children's Bureau or the Surgeon General.

I recommend that the phrase "method relating to the establishment and maintenance of personnel standards on a merit basis" be retained as included in subsection (4) of section 503, and that the rest of section (4) be omitted and that subsection (5) be amended so as to read "providing for an advisory council composed of the council of the State Medical Association."

This is, of course, the custom in practically every State in which successful public health procedures are administered. You will recall that the preceding witnesses have said that the council of each state medical association is composed of one representative from each Congressional District, selected by its House of Delegates, as its administrative body between its annual sessions. All of these councils have the distinct advantage of advice and service of the numerous standing and special committees of each State medical association.

Section 506 should be amended to provide for the Federal health council above referred to.

I would omit all authorization for hospitalization or other medical care from all of the other titles of the bill and would increase the appropriation in section 1301 of Title XIII by adding the omitted allotments for treatment so that all treatment would be carried for under the same administrative authority.

The limit for carrying out the provisions of Title XIII should be provided at not to exceed \$300,000,000 and this sum should be reached by gradual increments up to the fifth year. Similar changes should be made, of course, in other titles of the bill.

I can see no possible excuse for the provision of the administration of Title XIII by the Social Security Board. This is a welfare organization and an insurance agency

without a medical officer attached to it, except as a consultant. Giving it administrative authority in the public health field would mean, in the first place, expensive duplication of the personnel of the Public Health Service and would result in confusion in the administration by a new agency which already has its hands full with the administration of those provisions of the Social Security Act which have been assigned to it. Gentlemen of the committee, I cannot speak too emphatically when I say that the provision of Federal aid for compulsory health insurance at the present time would be both an economical and an administrative mistake. It should be clearly understood by the members of the committee and the Congress and by the people that compulsory health insurance in no country on the globe makes any provision for the care of the indigent and the medically indigent.

This is the paramount medical problem in these United States, and if you will aid us in permitting the medical profession to provide the necessary facilities by bearing the actual cost for care of the indigent and the medically indigent, I am sure you will find there will be no difficulty about taking care of the low income groups whose problem now seems so pressing. Those who are able to pay are now having to bear the burden of the whole cost of medical care. Almost, if not quite one-third of our people are indigent or medically indigent, and the care is a problem, and a proper cause of concern by local, State and Federal governments and should be provided for by a combination of them, wherever need exists.

If Federal aid is provided for compulsory health insurance now, when it can only be undertaken by a very few of the richest States, all of the other States would be contributing to the least pressing of medical problems and in so doing would be lessening their own resources for the solution of their real needs. Let New York or Wisconsin who are financially able, if they will, experiment and do the same research work in compulsory health insurance that we have had for these 20 years in public health procedures and in medical care for the indigent in all parts of the country, then if it should be found advisable and economical, it is possible some plan may be worked out that will be satisfactory to the whole country, but I submit that it is very important that we should not be tempted in the poorer states to use our limited resources for the solution of any but our most pressing problems.

The low income, industrial groups, the only beneficiaries of compulsory health insurance, are organized and can take care of themselves; the poor are organized nowhere, and it is the purpose of the medical profession, and I am sure, of the Congress, to see that they are not forgotten.

I regret to say that even under the very much fairer proportion provided in the proposed amendment to section 1101 (2) (e) of the Social Security Act, that Kentucky would be unable to avail itself of sufficient funds to adequately carry out a good program. We have practically reached the limit in State revenue. Every candidate for Governor in both political parties, has pledged himself that there will be no increase of taxation in the next four years. Unless the proportions in the amendment would be changed from a 66 2-3 to 33 1-3 per centum ratio to an 80 to 20 ratio, we will still be found unable to secure the benefits that should derive from being citizens of the United States.

In closing my testimony, Mr. Chairman, I want to say to you that I am sure that the opportunity that has been given to the medical profession of Kentucky through the cooperation we have had with the Public Health Service and the Children's Bureau has resulted in changing the whole picture of the lives of thousands of school children; that hundreds, yes, thousands of fathers and mothers are healthier today, working for and with their families who would have been invalids or dead, had not Titles V and VI of the Social Security Act been enacted into law.

OFFICIAL ANNOUNCEMENTS

PRELIMINARY PROGRAM

KENTUCKY STATE MEDICAL ASSOCIATION

September 11, 12, 13, 14, 1939

Bowling Green

Tuesday, September 12

9 A. M.

Call to Order by the President

.....W. E. Gardner
Louisville

InvocationRev. G. Dewey Kimbell
Pastor, Westminster Presbyterian Church
Bowling Green

Address of Welcome.....J. H. Blackburn
Bowling Green

Response D. M. Griffith
Owensboro

Installation of President

Report of Committee on Arrangements
..... Eldon W. Stone
Bowling Green

SCIENTIFIC SESSION

Tuesday, September 12

10 A. M.

1. Varicosities of the Lower Extremities and Their Treatment
.....D. G. Miller, Jr.
Morgantown
2. Auto-transfusion, A Life Saving Procedure, With Case Reports.....
..... B. J. Baute
Lebanon
3. Diagnosis and Management of Occipito-posterior Positions
..... Winn Hord
Maysville



LIBRARY BUILDING

Western State Teachers College, Where the Scientific Session Will
Be Held and Scientific and Commercial Exhibits Will Be Located.

4. Tracheo-bronchitis in Children
.....Hurry S. Andrews
Louisville

SPECIAL ORDER

Tuesday, September 12
Noon

ORATION IN SURGERY

- Principles of the Treatment of Fractures
.....R. Arnold Griswold
Louisville

SCIENTIFIC SESSION

Tuesday, September 12
2 P. M.

1. Pituitary Adenoma and X-ray Therapy of the Disease (Slides) Hoy Newman
Bowling Green
2. Sulfapyridine Indications, Bad Effects and Methods of AdministrationJ. Murray Kinsman
Louisville
3. Blood Dyscrasias Associated with AnginaMurray L. Rich
Covington
4. Treatment of Artificial Menopause
..... Roger Irving Lee
Boston

Burgoo: 5-7 P. M., Municipal Park

SCIENTIFIC SESSION

Tuesday Evening, September 12
8 P. M.

- Medical Prophecy.....Roger Irving Lee
Boston

Wednesday, September 13
9 A. M.

1. Management of Pneumonia in Small Urban Communities.....W. P. Parks
Harlan
2. Hemorrhoids, Local and Systemic Consideration Rufus C. Alley
Lexington
3. The Psychiatrist's Responsibility to the So-called Criminally Insane and to Society (Slides)Thomas J. Crice
Louisville
4. Intrapleural Pneumolysis (Slides)
..... Allen E. Grimes
Lexington

SPECIAL ORDER

Wednesday, September 13
12 Noon

- Infection as the Etiological Factor in Organic Heart Disease
.....E. B. Willingham
Paducah

SCIENTIFIC SESSION

Wednesday, September 13
2 P. M.

1. Cancer of the Larynx as a Medical ProblemJ. S. Baumgardner
Louisville

2. Cholangiography (Slides)
..... Malcolm Thompson
Louisville

3. A Consideration of Lesions in the Upper Urinary Tract, Simulating Gastro-intestinal Disorders (Slides)
..... Lytle Atherton
Louisville

4. Clinico-Pathological Conference
..... Louis Hamman
Baltimore

ANNUAL SUBSCRIPTION DINNER

Wednesday, September 13
6:30 P. M.

- President's Address J. W. Scott
Lexington
- Problems in Hematological Diagnosis
..... Louis Hamman
Baltimore

SCIENTIFIC SESSION

Thursday, September 14,
9 A. M.

1. Relations of Ocular Conditions to General PracticeDavid L. Salmon
Madisonville
2. The Diagnosis and Treatment of Certain Types of Anemia.....R. E. Hayes
Glasgow
3. The Patient a Personality, Not a Machine John H. Blackburn
Bowling Green
4. Modern Therapy of the Common Blood Stream Infections
..... Harper E. Richey
Louisville
5. Cancer of the Breast.....Donald Guthrie
Sayre, Pa.

SCIENTIFIC SESSION

Thursday, September 14,
2 P. M.

1. Swine Erysipelas in ManD. L. Jones
Fulton
2. Symposium on Allergy:
 - (a) The Newer Concepts of Allergy
..... Milton Cohen
Cleveland
 - (b) Diagnosis of Allergic Conditions Frank Simon
Louisville
 - (c) Treatment of the More Common Allergic Diseases
..... Armand E. Cohen
Louisville
 - (d) Allergic Skin Diseases
..... Adolph B. Loveman
Louisville
 - (e) Allergy in Children
..... Irving Rosenbaum, Jr.
Louisville

LOCAL COMMITTEES FOR THE STATE MEDICAL MEETING

GENERAL CHAIRMAN:

Eldon Stone

FINANCE COMMITTEE:

W. O. Carson, Chairman
Dallis L. Cornwell
Hal Neel
Galen H. Freeman
J. M. Adair
S. J. Martin

GOLF COMMITTEE:

Hal Neel, Chairman
Fred Reardon
T. H. Singleton
L. O. Tocmey
G. M. Wells

HOTEL COMMITTEE:

G. Y. Graves, Chairman
J. T. Gilbert
W. R. McCormack
Hoy Newman
E. J. Keen

ARRANGEMENTS COMMITTEE:

John Blackburn, Chairman
J. B. Helm
Finis London
Robert C. Moss
Ernest Rau
J. O. Carson

ENTERTAINMENT COMMITTEE:

C. E. Francis, Chairman
D. B. Stone
W. O. Carson
A. D. Donnelly
W. P. Drake

OFFICIAL CALL

THE KENTUCKY STATE MEDICAL ASSOCIATION
TO BE HELD IN THE LIBRARY BUILDING,
WESTERN KENTUCKY TEACHERS COLLEGE,
BOWLING GREEN

To the officers and members of the Component County Societies of the Kentucky State Medical Association.

The C. H. Spillman Memorial Meeting of the Kentucky State Medical Association will convene in the Library Building, Western Kentucky Teachers College, Bowling Green, Monday, Tuesday, Wednesday and Thursday, September 11, 12, 13, 14, 1939.

THE HOUSE OF DELEGATES

The House of Delegates of the Kentucky State Medical Association will convene in

the Auditorium of the Library Building at 2 P. M. and at 7:30 P. M. on Monday, September 11, 1939.

FIRST SESSION

The First General Session, which constitutes the opening exercises of the scientific function of the Association, will be held in the Auditorium of the Library Building, Tuesday, September 12, at 9 A. M.

THE COUNCIL

The Council will convene in the Library Building Monday, Sept. 11, at 10:30 A. M.

The Registration Department will be open in the Foyer of the Library Building from 10 A. M. to 5 P. M. on Monday, September 11th; from 8:30 A. M. to 5 P. M. Tuesday and Wednesday, September 12th and 13th, and from 8:30 A. M. to 12:00 Noon on Thursday, September 14, 1939.

COUNCILOR DISTRICTS

FIRST DISTRICT

V. A. Stilley, Benton, Councilor		
Ballard	Hickman	Trigg
Caldwell	Livingston	Graves
Calloway	McCracken	Fulton
Carlisle	Marshall	Lyon
Crittenden		

SECOND DISTRICT

D. M. Griffith, Owensboro, Councilor		
Daviess	Hopkins	Ohio
Hancock	McLean	Union
Henderson	Muhlenberg	Webster

THIRD DISTRICT

C. C. Turner, Glasgow, Councilor		
Allen	Cumberland	Simpson
Barren	Logan	Todd
Butler	Monroe	
Christian	Metcalfe	Warren-Edmonson

FOURTH DISTRICT

J. I. Greenwell, New Haven, Councilor		
Breckenridge	Hardin	Meade
Butler	Hart	Nelson
Grayson	Larue	Spencer

FIFTH DISTRICT

J. B. Lukins, Louisville, Councilor		
Carroll	Henry	Shelby
Franklin	Oldham	Trimble
Gallatin	Jefferson	Owen

SIXTH DISTRICT

W. B. Atkinson, Campbellsville, Councilor		
Adair	Green	Taylor
Anderson	Marion	Washington
Boyle	Mercer	

SEVENTH DISTRICT

V. G. Kinnaird, Lancaster, Councilor		
Casey	Lincoln	Rockcastle
Clinton	McCreary	Russell
Garrard	Pulaski	Wayne

EIGHTH DISTRICT

J. L. Shafer, Covington, Councilor		
Boone	Grant	Nicholas
Bracken	Harrison	Pendleton
Campbell-Kenton	Mason	Robertson
Fleming		

NINTH DISTRICT

Proctor Sparks, Ashland, Councilor		
Boyd	Floyd	Lawrence
Carter	Greenup	Martin
Carter	Johnson	Magoffin
Elliot	Lewis	Pike

TENTH DISTRICT

C. A. Vance, Lexington, Councilor

Bath	Lee	Powell
Bourbon	Madison	Rowan
Breathitt	Menifee	Scott
Clark	Montgomery	Wolfe
Fayette	Morgan	Estill
Jessamine	Owsley	Woodford

ELEVENTH DISTRICT

H. K. Buttermore, Liggett, Councilor

Bell	Knott	Leslie
Clay	Knox	Perry
Harlan	Laurel	Whitley
Jackson	Letcher	

CONSTITUTION AND BY LAWS OF THE KENTUCKY STATE MEDICAL ASSOCIATION ADOPTED AT PA- DUCAH IN 1902 AS AMENDED CONSTITUTION

ARTICLE I. NAME OF THE ASSOCIATION

The name and title of this organization shall be the Kentucky State Medical Association.

ARTICLE II. PURPOSE OF THE ASSOCIATION

The purpose of the Association shall be to federate and bring into compact organization the entire medical profession of the State of Kentucky and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science, to the elevation of the standard of medical education and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interest and to the enlightenment and direction of public opinion in regard to the great problem of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

ARTICLE III. COMPONENT SOCIETIES

Component societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV. COMPOSITION OF THE
ASSOCIATION

Section 1. This Association shall consist of Members, Delegates and Guests.

Section 2. MEMBERS. The members of this Association shall be the members of the component county medical societies.

Section 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component county

societies in the House of Delegates of this Association.

Section 4. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the Association or its Council, and shall be accorded the privilege of participating in all of the scientific work of that session.

ARTICLE V. HOUSE OF DELEGATES

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, (2) *ex-officio*, the officers of the association as defined in Article VIII, Section 1, of this Constitution and (3) the five immediate past presidents.

ARTICLE VI. SECTIONS AND DISTRICT
SOCIETIES

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections and for the organization of such Councilor District Societies as will promote the best interest of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VII. SESSIONS AND MEETINGS

Section 1. The Association shall hold an Annual Session, during which there shall be held daily not less than two General Meetings, which shall be open to all registered members, delegates and guests.

Section 2. The time and place for holding each annual session shall be fixed by the House of Delegates.

ARTICLE VIII. OFFICERS

Section 1. The officers of this Association shall be a President, three Vice-Presidents, a Secretary, a Treasurer, and eleven Councilors.

Section 2. The President and Vice-Presidents shall be elected for a term of one year. The Secretary, Treasurer and Councilors shall be elected for terms of five years each the Councilors being divided into classes so that two shall be elected each year. All of these officers shall serve until their successors are elected and installed.

Section 3. The officers of the Association shall be elected by the House of Delegates on the morning of the last day of the Annual Session but no Delegates shall be eligible to any office named in the preceding section, except that of Councilor and no person shall be elected to any such office who is not in attendance upon the Annual Session, and

who has not been a member of the Association for the past two years.

ARTICLE IX. FUNDS AND EXPENSES

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publication. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Session, for publication and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X. REFERENDUM

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members, a majority of such vote shall determine the question and be binding upon the House of Delegates.

ARTICLE XI. THE SEAL

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

ARTICLE XII. AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the Previous Annual Session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS

CHAPTER I. MEMBERSHIP

Section 1. All members of the Component County Societies shall be privileged to attend all meetings and take part in the proceedings of the Annual Session, and shall be eligible to any office within the gift of the Association. PROVIDED, that no physician may become a member of any county society unless he signs and keeps inviolate the following pledge:

I hereby promise upon my honor as a gentleman that I will not so long as I am a member of the Kentucky State Medical Association practice division of fees in any

form; neither by collecting fees from others referring patients to me nor by permitting them to collect fees from me nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I in any way, directly or indirectly, compensate anyone referring patients to me nor will I utilize any man as an assistant as a subterfuge for this purpose.

Section 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a chartered county society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the Annual Session in the respective bodies of this Association.

Section 3. No persons who are under sentence or suspension or expulsion from any component society of this Association, or whose name has been dropped from its rolls of membership shall be entitled to any of the rights or benefits of this Association, nor its proceedings until such time as he has been relieved of such liability.

Section 4. Each member in attendance at the Annual Session shall enter his name on the registration book indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II. ANNUAL AND SPECIAL SESSION OF THE ASSOCIATION

Section 1. The Association shall hold an annual session, meeting every third year in the city of Louisville, and the other two years at some point in the State fixed at the preceding annual session.

CHAPTER III. GENERAL MEETING

Section 1. The General Meeting shall include all registered members, delegates, and guests, who shall have equal rights to participate in the proceedings and discussions, and except guests, to vote on pending questions. Each General Meeting shall be presided over by the President or in his absence or disability or upon his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President, and the annual orations and the entire time of the sessions as

far as may be, shall be devoted to papers and discussions relating to scientific medicine.

Section 2. The General Meeting shall have authority to create committees or commissions for scientific investigation of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

Section 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

Section 4. No address or paper before the Association except those of the President and orators shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

Section 5. All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read and if this is not done it shall not be published.

CHAPTER IV. HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Association and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But if the business interests of the association and profession require, it may meet in advance or remain in session after the final adjournment of the General Meeting.

Section 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every twenty-five members, and one for each major fraction thereof, but each county society holding a charter from the Association, which has made its annual report and paid its assessments as provided in this Constitution and By-Laws shall be entitled to one delegate. In case the regularly elected delegate or alternate is unable to attend the annual meeting of the Association, the President of the county society may in writing appoint an alternate, who shall have the rights and privileges of a delegate.

Section 3. A majority of the registered delegates shall constitute a quorum and all

of the meetings of the House of Delegates shall be open to members of the Association.

Section 4. It shall, through its officers, Advisory Council, and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Session a stepping stone to further ones of higher interest.

Section 5. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Section 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every physician in every county of the State who can be made reputable, has been brought under medical society influence.

Section 7. It shall encourage post-graduate work in medical centers as well as home study and research and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies. With these ends in view, five years after the adoption of the By-Laws, no voluntary paper shall be placed upon the annual program nor be heard in the Association which has not first been read in the county society of which the author is a member.

Section 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body, in such manner that not more than one-half of the delegates shall be elected in any one year.

Section 9. It shall upon application provide and issue charters to county societies organized to conform to the spirit of the Constitution and By-Laws.

Section 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies and

these societies, when organized and chartered shall be entitled to all the privileges and representation provided therein for county societies, until such counties may be organized separately.

Section 11. It may divide the counties of the State into Councilor Districts, and, when the best interests of the Association and profession will be promoted thereby, organize in each district a medical society, to meet midway between the annual session of the Association, and members of the chartered county societies and none other shall be members.

When so organized from the presidents of such district societies shall be chosen the Vice-Presidents of this Association and the Presidents of the county societies of the district shall be Vice-Presidents of such district societies.

Section 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

Section 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Section 14. It shall present a summary of its proceedings to the last General Meeting of each Annual Session, and shall publish the same as in the Journal.

CHAPTER V. ELECTION OF OFFICERS

Section 1. All elections shall be by secret ballot, and a majority of the vote cast shall be necessary to elect, provided, however, that when there are more than two nominees the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting continue until an election occurs in like manner.

Section 2. Any member known to have directly or indirectly solicited votes for, or sought any office within the gift of this Association shall be ineligible for any office for two years.

Section 3. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

Section 4. Nominations for President shall be called for by counties.

CHAPTER VI. DUTIES OF OFFICERS

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver annual address at such time as may be

arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office and so far as practicable, shall visit by appointment, the various sections of the State and assist the Councilors in building up the county societies and in making their work more practical and useful.

Section 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall elect one of the Vice-Presidents to succeed him.

Section 3. The Treasurer shall give bond for the trust imposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any real estate belonging to the Association and execute the necessary papers and shall in general subject to such direction have the care and management of the fiscal affairs of the Association. He shall pay money out of the Treasury only on written order of the President, countersigned by the Secretary; he shall subject his accounts to such examinations as the House of Delegates may order, and he shall annually render an account of his doings and of the state of funds in his hands.

The Council shall be the executive body of the House of Delegates and between sessions shall exercise the powers conferred on the House of Delegates by the Constitution and By-Laws.

Section 4. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the program for and attend all meetings of the Association and of the House of Delegates and he shall keep minutes of their respective proceedings in separate record books. He shall charge upon his books the assessments against each component county society at the end of the fiscal year; he shall collect and make proper credits for the same and perform such other duties as may be assigned him. He shall be custodian of all record books and papers belonging to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Session. He shall keep a card index register of all local practitioners of the State by counties, noting on each his status in relation to his county society and

upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notify members of meetings, officers of their election, and committees of their appointment and duties. He shall act as secretary of the Committee on Scientific Work. He shall be editor of the KENTUCKY MEDICAL JOURNAL. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of his time to his duties which will permit of his becoming proficient it is desirable that he shall receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII. THE COUNCIL

Section 1. The Council shall hold daily meetings during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three councilors. It shall meet on the last day of the Annual Session of the Association for reorganization and for the outlining of the work for the ensuing year. At this meeting it shall elect a chairman and secretary and it shall keep a permanent record of its proceedings. It shall through its Chairman, make an annual report to the House of Delegates at such time as may be provided, which report shall include an audit, of the account of the Secretary and Treasurer and other agents of this Association and shall also specify the character and cost of all the publications of the Association during the year, and the amounts of all other property belonging to the Association, or under its control, with such suggestions as it may deem necessary. In the event of a vacancy in any office the Council may fill the same until the annual election.

Section 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of

the profession and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each Annual Session of the House of Delegates. The necessary traveling expenses incurred by Councilor in the line of his duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

Section 3. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies or to this Association. All questions on an ethical nature brought before the House of Delegates of the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or a county society upon which appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

Section 4. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the chairman and secretary of the Council as such.

Section 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association and shall have authority to appoint such assistants to the editors as it deems necessary. It shall manage and conduct the KENTUCKY MEDICAL JOURNAL, which is the organ of the association, and all money received by the JOURNAL, the Council or any officer of the Association, shall be paid to the Treasurer of the Association on the first of each month.

Section 6. All reports on scientific subjects and all scientific discussions and papers read before the Association shall be referred to the KENTUCKY MEDICAL JOURNAL for publication. The editor, with the consent of the Councilor for the District in which he resides, may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Section 7. All commercial exhibits during the Annual Session shall be within the control and direction of the Council.

CHAPTER VIII. COMMITTEES

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Relations.

A Committee on Medical Education.

A Medico-Legal Committee.

A Committee on Arrangements, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

Section 2. The Committee on Scientific Work shall consist of three members of which the President-elect shall be a member and Chairman and the Secretary shall be a member and Secretary and shall determine the character and scope of the scientific proceedings of the Association, subject to the provisions or the instructions of the House of Delegates or of the Association or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented which shall be adhered to by the Association as nearly as practicable.

Section 3. The Committee on Public Relations shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and scientific medicine. It shall keep in touch with the profession and public opinions, shall endeavor to shape legislation so as to secure the best results for the whole people and shall utilize every organized influence in local, state and national affairs and elections. Its work shall be done with dignity becoming a great profession and with that wisdom which will make effective its work and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such times as may be arranged during the annual session.

Section 4. The Committee on Arrangements shall consist of the component society in the territory in which the annual session is to be held. It shall by committees of its own selection, provide suitable accommodations for the meeting places of the Association and of the House of Delegates, and of their respective committees and shall have

general charge of all arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program and shall make additional announcements during the session as occasion may require.

Section 5. The Medico-Legal Committee shall consist of three members, one of whom, the Chairman, shall be elected by the Council for five years, and the Secretary and Treasurer shall be the other two members *ex-officio*. This committee shall select and fix the compensation for an attorney, who shall act as General Counsel, and if required, additional local counsel. The Association through this Committee shall defend its members who are in good standing against unjust suits for malpractice.

CHAPTER IX. ASSESSMENTS AND EXPENDITURES

Section 1. The assessment of five dollars per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-official physicians of the county to the Secretary of this Association on the first day of January in each year.

Section 2. Any county society which fails to pay its assessments, or make the report required, on or before the first day of April in each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Section 3. All motions or resolutions appropriating money shall specify a definite amount or so much thereof as may be necessary for the purpose indicated and must be approved by the Council and House of Delegates.

CHAPTER X. RULES OF CONDUCT

The Principles set forth in the Principles of Ethics of the American Medical Association shall govern the conduct of members in their relation to each other and to the public.

CHAPTER XI. RULES OF ORDER

The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts Rules of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII. COUNTY SOCIETIES

Section 1. All county societies now in affiliation with the State Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws shall upon application to the House of Delegates, receive a charter from and become a component part of this Association.

Section 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Section 3. Charters shall be issued only upon approval of the House of Delegates and shall be signed by the President and Secretary of this Association. The House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Section 4. Only one component medical society shall be chartered in any county. When more than one county society exists friendly overtures and concessions shall be made with the aid of the Councilor of the District if necessary and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

Section 2. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Association every reputable and legally registered physician who is practicing, or who will agree to practice non-sectarian medicine shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every physician in the county to become a member.

Section 6. Any physician who may feel aggrieved by the action of the society of the county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, which upon a majority vote may permit him to become a member of an adjacent county society.

Section 7. In hearing appeals, the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual councilors in district and county work, effort at conciliation

and compromise shall precede all such hearings.

Section 8. When a member in good standing in a component society moves to another county in the State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

Section 9. A physician living in or near a county line may hold membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Section 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Section 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferences shall be unstintingly given to such members.

Section 12. At the time of the annual election of officers each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association in the proportion of one delegate to each twenty-five members or major fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Association at least sixty days before the Annual Session.

Section 13. The Secretary of each county society shall keep a roster of its members and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on the first day of January of each year, or as soon thereafter as possible, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any

change in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Section 14. The Secretary of each county society shall report to the Kentucky Medical Journal full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

CHAPTER XIII. AMENDMENTS

These By-Laws may be amended by any Annual Session by a two-thirds vote of all the delegates present at that session, after the amendment has been laid on the table for one day.

CONSTITUTION AND BY-LAWS FOR COUNTY SOCIETIES

Prepared by the Committee on Organization
of the American Medical Association
of which the late Dr. J. N. McCormack was Chairman

ARTICLE I. NAME AND TITLE OF THE SOCIETY

The name and title of this organization shall be the _____ County Medical Society.

ARTICLE II. PURPOSE OF THE SOCIETY

The purpose of this society shall be to bring into one organization the physicians of _____ County, so that by frequent meetings and full and frank interchange of views they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in all scientific, legislative, public health, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community to which its honorable history and great achievements entitle it; and with other county societies to form the _____ State Medical Association, and through it, with other state associations, to form and maintain the American Medical Association.

ARTICLE III. ELIGIBILITY

Every legally registered physician residing and practicing in _____ County who is of good moral and professional standing and who does not support or practice, or claim to practice, any exclusive system of medicine, shall be eligible for membership.

ARTICLE IV. MEETINGS

Regular meetings shall be held at such time and place as may be determined by the Society.

Special meetings may be called by the President and shall be called on a written request of five members. A call for a special meeting shall state the object of such meeting, at which no business except that stated in the call shall be transacted.

ARTICLE V. OFFICERS

The officers of this Society shall consist of a President, Vice-President, Secretary, Treasurer, Delegates and Board of three Censors. These officers, except the Delegates and Board of Censors, shall be elected annually. Delegates shall be elected for two years, and in accordance with the Constitution and by-laws of the state association. One member of the Board of Censors shall be elected each year to serve for three years, provided that at the first election after the adoption of this constitution one member of the Board shall be elected for one year, one for two, and one for three years.

ARTICLE VI. FUNDS AND EXPENSES

Funds for meeting the expenses of the Society shall be raised by annual dues, special assessments and voluntary contributions. Funds may be appropriated by vote of the Society for such purposes as will promote its welfare and that of the profession.

ARTICLE VII. CHARTER

The Society shall apply to the council of the state association for a charter at the meeting at which this constitution and by-laws are adopted, or as soon thereafter as practicable, and the charter shall be kept by the Secretary.

ARTICLE VIII. INCORPORATION

The Society shall have authority to appoint a Board of Trustees and to provide for articles of incorporation whenever it may deem this necessary.

ARTICLE IX. AMENDMENTS

The Society may amend any article of this constitution by a two-thirds vote of its members at any regular meeting, provided that such amendment or amendments are not in conflict with the laws and regulations of the state association; provided, also, that such amendment shall have been read in open sessions at a previous regular meeting and shall have been sent by mail to each member ten days in advance of the meeting at which final action is to be taken.

BY-LAWS

CHAPTER I. MEMBERSHIP

Section 1. The Society shall judge of the qualification of its members, but as it is the only door to the State Medical Association and to the American Medical Association for physicians within its jurisdiction, every reputed and legally qualified physician of _____ county who does not support or practice or claim to practice, sectarian medicine shall be eligible to membership.

Section 2. A candidate for membership shall make application in writing and shall state his age, his college and date of graduation, the place in which he has practiced, and the date of registration in this state. The application must be accompanied by the admission fee and must be endorsed by two members of this Society. It shall be referred to the Board of Censors, who shall inquire into the standing of the applicant, assure themselves that he or she is duly registered according to the laws of the state, and report at the next regular meeting of this Society. Election shall be by ballot, and two thirds of the votes of the members present and voting shall be necessary to elect. The application shall be returned to the Secretary, who shall file it for future reference. Applications for membership from rejected candidates shall not be received within six months of such rejection.

Section 3. A physician, accompanying his application with a transfer card from another component county society of this or any state within 60 days of the issuance of said card, shall be admitted without fee on a majority vote of the members present, and without the application being referred to the Board of Censors. Such application may be acted on at the meeting at which it is presented on the vote of three fourths of the members present, otherwise it shall lie over until the next regular meeting. No annual dues for the current year shall be charged against such members provided the same have been paid to the Society from which the applicant comes.

Section 4. A physician residing in an immediately adjoining county may become a member of this Society in like manner and on the same terms as a physician living in this county, by permission of the county society of the county in which the applicant lives.

Section 5. A member in good standing who is free from all indebtedness to this Society, and against whom no charges are pending

wishing to withdraw, shall be granted a transfer card. This card shall state the date the member associated himself with the Society, the date of issuance of the card, and shall be signed by the President and Secretary. It shall be accompanied with a copy of the application presented at the time the member joined the Society, for information to the Society to which the member desires, to attach himself.

Section 6. All members shall be equally privileged to attend all meetings and take part in the proceedings, and shall be eligible to any office or honor within the gift of the Society so long as they conform to this constitution and by-laws, including the payment of dues. A member who is under sentence of suspension or expulsion shall not be permitted to take part in any of the proceedings or be eligible to any office until relieved of such disability. And, provided further, that none of the privileges of membership shall be extended to any person not a member of this Society except on a majority vote of the Society in regular meeting.

Section 7. A member who is guilty of a criminal offense or gross misconduct either as a physician or as a citizen, or who violates any of the provisions of this constitution and by-laws, shall be liable to censure, suspension or expulsion. Charges against a member must be made in writing and be delivered to the Secretary, who shall immediately furnish a copy to the accused and to the Chairman of the Board of Censors. The Board of Censors shall investigate the charges on their merits, but no action shall be taken by the Board within ten days of the presentation of the charges to the accused, nor before giving the accused and accusers ample opportunity to be heard. The board shall report (1) that the charges are not sustained; or (2) that the charges are sustained and that the accused be (a) censured; (b) suspended for a definite time, or (c) expelled. Censure or suspension shall require a two-thirds vote of the members present and voting and a three-fourths vote of those present and voting shall be required to expell a member. No action shall be taken by the Secretary in such cases until at least six weeks have elapsed since filing of the charge. A member suspended for a definite time shall be reinstated at the expiration of the time.

Section 8. Kindly efforts in the interest of peace, conciliation or reformation, so far as possible and expedient, shall precede the filing of formal charges affecting the character or standing of a member, and the accused shall have opportunity to be heard in his own

defense in all trials and proceedings of this nature.

Section 9. Members expelled from this Society for any cause shall be eligible for membership after one year from date of expulsion and on the same terms and in like manner as original applicants.

CHAPTER II. POWERS AND DUTIES

Section 1. This Society shall have general direction of the affairs of the medical profession of the county, and its influence shall be constantly exerted to better the scientific, material and social condition of every physician within its jurisdiction. Systematic efforts shall be made by each member, and by the Society as a whole, to increase the membership until it embraces every reputable physician in the county.

Section 2. A meeting shall be held at ——— p. m. on the ——— in each month (or oftener). ——— members shall constitute a quorum.

The officers and committee on program shall profit by experiences and by example of other similar societies, and strive to arrange for the most attractive and successful proceedings for each meeting. Crisp papers and discussions and reports of cases shall be arranged for and encouraged, and tedious and profitless proceedings and discussions shall be avoided as far as practicable.

Section 3. Agreements and schedules for fees shall not be made by this Society, but at least one meeting during each year shall be set apart for discussion of the business affairs of the profession of the county, with the view of adopting the best methods for the guidance of all. In all proper ways the public shall be taught that business methods and prompt collections are essential to the equipment of the modern physician and surgeon and that it suffers even more than the profession when this is not recognized.

Section 4. This Society shall endeavor to educate its members to the belief that the physician should be a leader in his community, in character, in learning, in dignified and mannerly bearing, and in courteous and open treatment of his brother physicians, to the end that the profession may occupy that place in its own and the public estimation to which it is entitled.

CHAPTER III. OFFICERS

Section 1. The officers of the Society shall be elected at the December meeting in each year which shall be known as the annual meeting. Nominations shall be made by informal ballot, and all elections be by ballot. The vote of the majority of all the mem-

bers present shall be necessary to an election.

Section 2. The President shall preside at the meetings of the Society, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession in the county during the year, and it shall be his pride and ambition to leave it in better condition as regards both scientific attainments and harmony than at the beginning of his term of office.

Section 3. The Vice-President shall assist the President in the performance of his duties, shall preside in his absence, and on his death, resignation or removal from the county, shall succeed to the presidency.

Section 4. The Society shall record the minutes of the meetings and receive and care for all records and papers belonging to the Society, including its charter. He shall notify each member of the Society as to the time and place of each meeting, and, whenever possible, give the program for the meeting. He shall keep account of and promptly turn over to the Treasurer all funds of the Society which may come into his hands. He shall make and keep a list of the members of this Society in good standing, noting of each his correct name, address, place and date of graduation, and the date of the certificate entitling him to practice medicine in this state; and in a separate list he shall note the same facts in regard to each legally qualified physician in this county not a member of this Society. It shall be his duty to send a copy of such lists, on blank forms furnished him for that purpose, to the Secretary of the state association at such time as may be designated by the state association. In making such lists he shall endeavor to account for each physician who has moved into or out of the county during the year, stating when possible, both his present and past address. At the same time, and with his report of such lists of members and physicians, he shall transmit to the state association his order on the Treasurer for the annual dues of the Society.

Section 5. The Treasurer shall receive all dues and money belonging to the Society from the hands of the Secretary or members and shall pay out the same only on the written orders of the President, countersigned by the Secretary.

Section 6. The Delegates shall attend and faithfully represent the members of this Society and the profession of this county in the House of Delegates of the State association, and shall make a report of the proceedings of that body to this Society at the earliest opportunity.

CHAPTER IV. COMMITTEES

Section 1. There shall be a Board of Censors as provided in the constitution, a Standing Committee on Program and Scientific Work, a Committee on Public Health and Legislation, and such special committees as may from time to time be deemed necessary.

Section 2. Board of Censors. This Board shall examine and report on the qualification of applicants for membership subjecting each applicant to such examination as it may deem necessary. It shall investigate charges preferred against a member, and report its conclusions and recommendations to the Society. In case of the absence of a member of the Board, the President may appoint such member to fill the vacancy. The senior member of the Board in point of service shall be Chairman of the Board.

Section 3. Committee on Program and Scientific Work. This Committee shall consist of the President, Vice-President and Secretary. It shall be the duty to promote the scientific and social functions of the Society by arranging attractive programs for each meeting by urging each member to take part in the scientific work. It shall stimulate fraternalism and good feeling among the members in every way possible. (Provisions should be made in this Section for the annual luncheons, dinners, etc., which the Committee believes to be an excellent way to bring members together. Such occasions should be made as inexpensive as possible).

Section 4. Committee on Public Health and Legislation. This committee shall consist of three members who shall be appointed annually by the President. It shall be its duty to enforce and support the sanitary and medical laws of the state in this county, to co-operate with the Committee on Public Policy and Legislation of the state association in all matters pertaining to legislation, and to prosecute quacks and medical pretenders in this county.

CHAPTER V. FUNDS AND EXPENSES

Section 1. The admission fee, which must accompany the application, shall be \$—— and shall include the annual dues for the fiscal year. The admission fee shall be returned if the applicant is not accepted.

Section 2. The annual dues shall be \$—— and shall be payable on January 1 of each year. Any member who shall fail to pay his annual dues by April 1 shall be held as suspended without action on the part of the Society. A member suspended for non-payment of dues shall be restored in full

membership on payment of all indebtedness. Members more than one year in arrears shall be dropped from the roll of members.

Section 3. The fiscal year of this Society shall be from January to December inclusive.

CHAPTER VI. ORDER OF BUSINESS

The order of business shall be as follows:

1. Call to order by the President.
2. Reading of the minutes of last meeting.
3. Clinical cases.
4. Papers and discussions.
5. Unfinished business.
6. Miscellaneous business.
7. Announcements.
8. Adjournment.

CHAPTER VII. RULES OF ORDER

The deliberations of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by vote.

CHAPTER VIII. PRINCIPLES OF MEDICAL ETHICS

The Principles of Medical Ethics of the American Medical Association shall govern this Society.

CHAPTER IX. AMENDMENTS

These by-laws may be amended at any regular meeting by a two-thirds vote, provided that such amendment has been read in open session at the preceding regular meeting and a copy of the same has been sent to each member by the Secretary ten days in advance of the meeting at which final action is to be taken.

REPORT OF TREASURER*

STATEMENT OF ASSETS

September 1, 1939

Cash—

Treasurer's Checking Account at The Kentucky Bank and Trust Company, Madisonville, Kentucky	\$ 996.80
Treasurer's Savings Account at The Kentucky Bank and Trust Company, Madisonville, Kentucky	10,390.68
Student Loan Fund Account at The Kentucky Bank and Trust Company, Madisonville, Kentucky	22.82
Total Cash in Bank	\$11,410.30
Bonds and Stocks in Possession of Treasurer (Exhibit D)	2,609.75
Office Furniture, etc. (Exhibit E)	819.45
Loan to James Blackerby, February 10, 1931, from Student Loan Fund	250.00
Loan to Times-Journal Publishing Company, July 29, 1938 (Exhibit F)	490.85
Amount Due from Cooperative Medical Advertising Bureau for advertising in June issue of Journal	231.55
Net Miscellaneous Accounts Receivable	136.98
Total Net Assets	\$15,948.83

Note: Treasurer's checking account balance of \$996.80 represents the net balance after an advance of \$747.08 to the McDowell Memorial Fund, which latter fund shows an overdraft of this amount.

*Books of the Association were audited by P. Willett Hagan, certified Public Accountant, Louisville, Kentucky.

EXHIBIT A

Reconciliation of Treasurer's Accounts for the period from September 1, 1938, to September 1, 1939.

CHECKING ACCOUNT THE KENTUCKY BANK AND TRUST COM- PANY, MADISONVILLE

Balance agreeing with Secretary's last report (September 1, 1938)...		\$ 1,151.47
Receipts from operation of Association and Journal	\$16,301.21	
Rent—State Department of Health	24,246.05	40,547.26
Total		\$41,698.73
Receipts—J. N. McCormack Memorial		446.85
McDowell Memorial Fund		
Balance September 1, 1938	\$ 1,802.75	
Donations	1,445.00	3,247.75
Total amount to be accounted for		\$45,393.33
Disbursements for Kentucky State Medical Association and Journal	\$15,708.80	
Rental—State Department of Health and Kentucky State Medical Association Building	24,246.05	
J. N. McCormack Memorial Expense	446.85	
McDowell Memorial Expense	3,994.83	\$44,396.53

Balance in Treasurer's Checking Account (September 1, 1939)		\$ 996.80
Reconciliation of above balance with statements received from The National Bank of Cynthiana, and Kentucky Bank and Trust Company, Madisonville:		
Balance in National Bank of Cynthiana	\$ 63.20	
Balance in The Kentucky Bank and Trust Company, Madisonville	7,688.81	
Treasurer's Checking Accounts		\$ 7,752.01
Plus—Undeposited receipt, State of Kentucky Treasury Department Check for balance due on rent of building		5,679.55
		\$13,431.56

Less—Vouchers outstanding, viz:		
147—May 31, 1939—		
Louisville Postmaster	\$ 7.68	
157—May 31, 1939—		
Louisville Postmaster	55.52	
165—June 30, 1939—		
A. T. McCormack, M.D.	135.00	
166—June 30, 1939—		
L. H. South, M.D.	92.75	
168—June 30, 1939—		
Elva V. Grant	75.00	
169—June 30, 1939—		
Elizabeth Conkling	50.00	
170—June 30, 1939—		
Louise Morel	32.73	
171—June 30, 1939—		
A. T. McCormack, M.D. (reimbursement for rent)	5,679.55	
172—June 30, 1939—		
Railway Express Agency	2.66	
173—June 30, 1939—		
Meffert Equipment Company	6.00	
174—June 30, 1939—		
Louisville Postmaster	137.86	
175—June 30, 1939—		
Bush-Krebs Company	10.83	
176—June 30, 1939—		
American Surety Company of New York	7.70	
177—June 30, 1939—		
Mayme Sullivan	1.40	
178—June 30, 1939—		
Southern Bell Telephone & Telegraph Company	28.70	
179—June 30, 1939—		
Times-Journal Publishing Com-		

pany	429.00	
180—June 30, 1939—		
Curtis & Curtis, Attorneys	150.00	
180a—June 30, 1939—		
Mrs. A. V. Britt	25.00	
181—June 30, 1939—		
Woman's Auxiliary, Kentucky State Medical Association	13.98	
181a—June 30, 1939—		
Nash and Rosa Raum	3,500.00	
182—July 31, 1939—		
A. T. McCormack, M.D.	135.00	
183—July 31, 1939—		
L. H. South, M.D.	90.00	
184—July 31, 1939—		
J. F. Blackerby	90.00	
185—July 31, 1939—		
Elva V. Grant	75.00	
186—July 31, 1939—		
Elizabeth Conkling	50.00	
187—July 31, 1939—		
Times-Journal Publishing Company	525.00	
188—Aug. 31, 1939—		
A. T. McCormack, M.D.	135.00	
189—Aug. 31, 1939—		
L. H. South, M.D.	90.00	
190—Aug. 31, 1939—		
J. F. Blackerby	90.00	
191—Aug. 31, 1939—		
Elva V. Grant	75.00	
192—Aug. 31, 1939—		
Elizabeth Conkling	50.00	
193—Aug. 31, 1939—		
Louise Morel	163.40	
194—Aug. 31, 1939—		
Times-Journal Publishing Company	425.00	\$12,434.76

Balance agreeing with Treasurer's Balance \$ 996.80
Vouchers Nos. 182 through 194 are in the hands of the Secretary to be delivered when due.

EXHIBIT B

SAVINGS ACCOUNT THE KENTUCKY BANK AND TRUST COM- PANY, MADISONVILLE

Receipts

Balance agreeing with Secretary's last report, September 1, 1938	\$10,257.60
Interest—	
On H. O. L. Corp. Bonds	\$ 10.29
On balance in Savings Account	102.53
Total Interest	\$112.82
Dividends:	
On Louisville Title Mortgage Co. Certificates No. 3069 and No. 1701	\$ 20.26
Total Interest and Dividends	\$ 133.08

Balance in Treasurer's Savings Account, September 1, 1939	\$10,390.68
Reconciliation of the above balance with statement received from The Kentucky Bank and Trust Company of Madisonville:	
Balance in The Kentucky Bank and Trust Company, Madisonville, Treasurer's Savings Account	\$10,390.68

EXHIBIT C

STUDENT LOAN FUND SAVINGS ACCOUNT THE KENTUCKY BANK AND TRUST COM- PANY, MADISONVILLE

Balance in Student Loan Fund Savings Account, September 1, 1939 (as per Secretary's last report, September 1, 1938) agreeing with statement received from The Kentucky Bank and Trust Company	\$22.82
---	---------

EXHIBIT D

BONDS AND STOCKS September 1, 1939

Bonds:	Par Value
Louisville Title Mortgage Co.—Participation Certificates—	
No. L7590—Bond No. 40 Rudy 37330 S. F.	\$ 850.00

No. L7594—Bond No. 3 Early 36768 S.	
F. -----	\$850.00
Less Partial Payment -----	590.25
	259.75
Home Owners Loan Corporation—	
No. X173861A 2 1/2 % Bond Due 49-39	\$500.00
No. T703532B 2 1/2 % Bond Due 49-39	100.00
No. T703533C 2 1/2 % Bond Due 49-39	100.00
No. R164879K 2 1/2 % Bond Due 49-39	50.00
	750.00
Total Bonds -----	\$1,859.75
Stocks:	
Louisville Title Mortgage Co. Common Stock	
Certificate No. 3069—81 shs. and Certificate	
No. 1701—31-100 shs. -----	\$ 750.00
Total Bonds and Stocks -----	\$2,609.75
The above bonds and stocks are held by The Kentucky Bank and Trust Company of Madisonville, in safekeeping for Amplas W. Davis, M.D., Treasurer, Madisonville.	

EXHIBIT E

INVOICE OF THE PROPERTY OF THE ASSOCIATION

September 1, 1939	
36 Bound Volumes Kentucky Medical Journals, 1903-38 -----	\$ 360.00
1 Underwood Typewriter -----	\$ 83.03
Less 90% Depreciation -----	74.73
	8.30

1 Allen Wales Adding Machine No. 10350	175.00
Less 50% Depreciation -----	87.50
	87.50
1 12-in. Oscillating Fan -----	16.00
Less 30% Depreciation -----	4.80
	11.20
1 Portable Amplifier Complete -----	230.23
1,000 No. 5 2-cent envelopes, Kentucky State Medical Association, @ \$21.96 per M -----	21.96
800 No. 5 3-cent envelopes, Kentucky State Medical Association, @ \$31.96 per M -----	25.56
1,000 No. 8 2-cent envelopes, Kentucky State Medical Association, @ \$26.88 per M -----	26.88
750 No. 8 3-cent envelopes, Kentucky State Medical Association, @ \$32.88 per M -----	24.66
1,000 No. 9 2-cent envelopes, Kentucky State Medical Association, @ \$23.16 per M -----	23.16
Total -----	\$ 819.45

OLD PROPERTY

1 Filing Cabinet.	
Rubber Stamps.	
Guide Cards.	
1 Globe Safe with Fixtures.	
1 Cabinet for Addressograph, 36 drawers.	
2 Cabinets for Addressograph, 18 drawers each.	
1 Cabinet for Addressograph, 9 drawers.	
23 Drawers.	
(All of the property listed under "Old Property" has been fully depreciated, and very little, if anything, could be realized from the sale of same, should a disposition be made of this property.)	

EXHIBIT F

KENTUCKY STATE MEDICAL ASSOCIATION LOAN

Times-Journal Publishing Company, @ 6% Interest, July 29, 1938 -----						\$1,400.00
Credit Allowance on Printing of Journal:						
Date of Allowance	Deduction on Checks	Gross Allowance	Period	Interest	Principal Allowance	Net Principal Balance
1938						
Sept. 30	No. 22	\$ 75.00	63 Days	\$14.49	\$ 60.51	\$1,339.49
Oct. 6	No. 25-A	75.00	6 Days	1.32	73.68	1,265.81
Oct. 31	No. 55	75.00	25 Days	5.20	69.80	1,196.01
Nov. 30	No. 76	75.00	30 Days	5.98	69.02	1,126.99
1939						
Jan. 30	No. 100	150.00	61 Days	11.29	138.71	988.28
Mar. 31	No. 125	150.00	60 Days	9.88	140.12	848.16
Apr. 29	No. 139	75.00	29 Days	4.03	70.97	777.19
May 31	No. 150	75.00	32 Days	4.06	70.94	706.25
June 30	No. 179	75.00	30 Days	3.53	71.47	634.78
July 31	No. 187	75.00	31 Days	3.22	71.78	563.00
Aug. 31	No. 194	75.00	31 Days	2.85	72.15	490.85
Totals	-----	\$975.00		\$65.85	\$909.15	

EXHIBIT H

RECEIPTS

Checking Account:	
Dues from County Societies (Exhibit J) -----	\$ 9,249.58
Income from Journal (Exhibit K) -----	7,030.53
Outstanding Checks Cancelled -----	21.10
Total Receipts from Operation in Checking Account -----	\$16,301.21
Rental—State Department of Health (Exhibit L) -----	24,246.05
Total Receipts of Checking Account -----	\$40,547.26
McDowell Memorial Fund:	
Donations for Purchase of McDowell Home and Apothecary Shop (Exhibit N) -----	1,445.00
J. N. McCormack Memorial Fund: Donations for Memorial Plaque -----	446.85
Savings Account:	
Interest and Dividends on Savings and Investments -----	\$ 133.08
Total Receipts from Investments -----	133.08
Total Receipts—All Funds -----	\$42,572.19
Balance on Hand September 1, 1938, McDowell Memorial Fund -----	\$ 1,802.75
Balance on Hand September 1, 1938, Association Checking Account -----	1,151.47
Balance on Hand September 1, 1938, Savings Account -----	10,257.60
Balance on Hand September 1, 1938, Student Loan Fund -----	22.82
Total Balances, September 1, 1938 -----	\$13,234.64
Total Receipts and Beginning Balances—All Funds -----	\$55,806.83

Checking Account:	
State Medical Association:	
President's Sundries -----	\$ 5.00
Secretary's Salary -----	1,620.00
Secretary's Stenographer's Salary -----	900.00
Secretary's Sundries -----	106.30
Treasurer's Bond -----	20.20
Treasurer's Sundries -----	13.60
Officers, Councilors and Committee Expenses -----	524.15
Committee on Public Policy Expense -----	1,080.00
Attorneys' Fees, Medico-Legal Committee -----	450.00
Stenographer, Medico-Legal Committee -----	600.00
Postage and Stamped Envelopes -----	344.53
Medical Research Project (History) -----	408.15
Stenographer, Medical Survey -----	50.00
Telephone and Telegrams -----	47.53
Association Sundries -----	350.11
Bowling Green Meeting Expenses -----	46.93
Louisville Meeting Expenses -----	1,260.52
Pediatric Meeting Expenses -----	10.76
Eye, Ear, Nose and Throat Section Expenses -----	6.50
Equipment (Portable Amplifier) -----	230.23
Total State Medical Association Kentucky Medical Journal: -----	\$ 8,074.51
Business Manager's Salary -----	\$ 1,080.00
Journal Advertisement Collections -----	
Paid Woman's Auxiliary, Kentucky State Medical Association -----	13.98
Journal Printing -----	\$6,931.50
Less credit allowance on note and interest -----	975.00
	5,956.50
Journal Postage -----	150.00
Journal Envelopes -----	153.60
Journal Express and Freight -----	29.56
Journal Sundries -----	250.65
Total Journal -----	\$ 7,634.29
Total Operation Disbursements -----	\$15,708.80

Rental—State Department of Health and Kentucky State Medical Association Building	\$24,246.05
J. N. McCormack Memorial Expense	446.85
McDowell Memorial Expense—	
Sundry Expense	\$ 494.83
Purchase of Apothecary Shop and Property	3,500.00
Total McDowell Memorial Expense	3,994.83

Total Rental and Memorial Expenses ----- \$28,687.73

Total Checking Account Disbursements	\$44,396.53
Balance on Hand this date, Checking Account	\$ 1,743.88
Balance on Hand this date, McDowell Memorial Fund	747.08
Balance on Hand this date, Savings Account	10,390.68
Balance on Hand this date, Student Loan Fund	22.82

Total Balances on Hand this date—All Funds ----- \$11,410.30

Total Disbursements and Ending Balances—All Funds ----- \$55,806.83

EXHIBIT I

Detailed list of receipts from County Societies from September, 1938, to September, 1939, compared with income of same period last year:

	1938	1939
Adair	\$ 30.00	\$ 25.00
Allen	35.00	35.00
Anderson	25.00	35.00
Ballard	25.00	35.00
Barren	100.00	95.00
Bath	40.00	30.00
Bell	130.00	90.00
Boone	40.00	25.00
Bourbon	85.00	90.00
Boyd	190.00	200.00
Boyle	70.00	60.00
Bracken-Pendleton	75.00	70.00
Breathitt	25.00	20.00
Breckinridge	35.00	30.00
Bullitt	35.00	30.00
Butler	15.00	15.00
Caldwell	55.00	60.00
Calloway	80.00	80.00
Campbell-Kenton	550.00	565.00
Carlisle	35.00	30.00
Carroll	20.00	30.00
Carter	45.00	50.00
Casey	10.00	15.00
Christian	150.00	155.00
Clark	85.00	65.00
Clay	25.00	35.00
Clinton	15.00	15.00
Crittenden	30.00	25.00
Cumberland	45.00	30.00
Daviess	180.00	185.00
Elliott	5.00	5.00
Estill	35.00	35.00
Fayette	575.00	595.00
Fleming	40.00	40.00
Floyd	45.00	85.00
Franklin	110.00	135.00
Fulton	75.00	65.00
Gallatin	5.00	10.00
Garrard	25.00	25.00

Grant	60.00	50.00
Graves	105.00	110.00
Grayson	25.00	15.00
Green	30.00	30.00
Greenup	65.00	55.00
Hancock	10.00	---
Hardin	110.00	100.00
Harlan	125.00	240.00
Harrison	85.00	65.00
Hart	35.00	30.00
Henderson	75.00	85.00
Henry	55.00	30.00
Hickman	25.00	30.00
Hopkins	100.00	100.00
Jackson	---	25.00
Jefferson	2,215.00	2,247.50
Jessamine	35.00	25.00
Johnson	50.00	60.00
Knott	---	5.00
Knox	60.00	55.00
Larue	15.00	15.00
Laurel	45.00	45.00
Lawrence	40.00	45.00
Lee	15.00	15.00
Leslie	---	---
Letcher	130.00	135.00
Lewis	20.00	20.00
Lincoln	40.00	40.00
Livingston	40.00	45.00
Logan	80.00	75.00
Lyon	20.00	20.00
McCracken	230.00	185.00
McCreary	40.00	40.00
McLean	---	30.00
Madison	165.00	170.00
Magoffin	---	---
Marion	45.00	45.00
Marshall	40.00	55.00
Martin	5.00	---
Mason	80.00	95.00
Meade	5.00	5.00
Menifee	5.00	10.00
Mercer	55.00	60.00
Metcalfe	20.00	25.00
Monroe	10.00	10.00
Montgomery	45.00	55.00
Morgan	10.00	10.00
Muhlenberg	75.00	70.00
Nelson	75.00	55.00
Nicholas	45.00	40.00
Ohio	40.00	35.00
Oldham	5.00	---
Owen	15.00	15.00
Owsley	15.00	5.00
Pendleton	---	---
Perry	145.00	180.00
Pike	125.00	125.00
Powell	20.00	10.00
Pulaski	85.00	92.08
Robertson	15.00	15.00
Rockcastle	45.00	40.00
Rowan	30.00	30.00
Russell	15.00	15.00
Scott	65.00	65.00
Shelby	80.00	85.00
Simpson	40.00	35.00
Spencer	5.00	10.00
Taylor	35.00	35.00
Todd	40.00	45.00
Trigg	5.00	25.00
Frimble	5.00	---
Union	25.00	20.00
Warren-Edmonson	140.00	130.00
Washington	35.00	35.00
Wayne	25.00	25.00
Webster	40.00	40.00
Whitley	100.00	85.00
Wolfe	30.00	25.00
Woodford	35.00	40.00

\$9,155.00 \$9,244.58

Second Dividend (10%) National Bank of Kentucky—Claim No. 10645—Liability No. 8556—Originally \$50.00 at date bank closed ----- 5.00

\$9,249.58

EXHIBIT J

Collections of dues by Secretary on account of Kentucky State Medical Association, corresponding with checks, deposit slips and receipts filed.

1938		
Oct.	1—To collections to date_____	\$ 217 08
Nov.	1—To collections to date_____	205.00
Dec.	1—To collection to date_____	30.00

Jan.	1—To	collections to date	120.00
Feb.	1—To	collections to date	1,730 00
Mar.	1—To	collections to date	1,550.00
Apr.	1—To	collections to date	1,835.00
May	1—To	collections to date	3,265.00
June	1—To	collections to date	297.50

Total for year -----\$9,249.58

OUTSTANDING CHECKS CANCELLED

Check No.	Date Issued	To Whom	Amount
130	July 31, 1930	Louis Vissman	-----\$ 20.10
30	Oct. 31, 1935	P. E. Blackerby	----- 1.00

Total Outstanding checks cancelled -----\$ 21.10

EXHIBIT K

Collections by Editor on account of the JOURNAL, corresponding with receipts and transferred to the Treasurer as evidenced by checks, deposit slips and receipts on file.

Receipts from Advertising.

Receipts from Advertising.				Profit Distribution		
	Co-operative Gross Amount	Medical Adv. Bureau Deduction	Bureau Net Receipts	Cards, Local Advertising, etc.	by Med'cal Adv. Bureau	Total Receipts from Journal
1938						
September -----	\$ 552.00	\$ 132.48	\$ 419.52	\$1,046.26		\$1,465.78
October -----	263.00	63.12	199.88	788.09		987.97
November -----	240.00	57.60	182.40	200.94		383.34
December -----	276.00	66.24	209.76	371.59	\$ 368.31	949.66
1939						
January -----	267.00	64.08	202.92	260.01		462.93
February -----	330.67	79.36	251.31	196.56		447.87
March -----	319.67	76.72	242.95	294.84		537.79
April -----	380.67	91.36	289.31	191.03		480.34
May -----	299.67	71.92	227.75	52.44		280.19
June -----	340.67	81.76	258.91	775.75		1,034.66
Totals -----	\$3,269.35	\$ 784.64	\$2,484.71	\$4,177.51	\$ 368.31	\$7,030.53

EXHIBIT L

Receipts and Disbursements in connection with Purchase of State Board of Health and Kentucky Medical Association Building, 620 S. Third Street, Louisville.

Receipts

From State Board of Health:

1938						
Oct. 8	—To	State of Kentucky	Treasury Department	Check	-----	\$ 5,600.00
1939						
Jan. 3	—To	State of Kentucky	Treasury Department	Check	-----	9,525.93
Feb. 27	—To	State of Kentucky	Treasury Department	Check	-----	2,140.57
Apr. 10	—To	State of Kentucky	Treasury Department	Check	-----	1,300.00
June 1	—To	State of Kentucky	Treasury Department	Check	(Undeposited) -----	5,679.55

Total Amount Received	\$24,246.05
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Disbursements

1938			
Oct. 8—	Reimbursement to A. T. McCormack, M.D., to apply on Note No 2—		
	Payment on Building	\$ 5,106.67	
	Interest due on \$120,000.00	493.33	\$ 5,600.00
1939			
Jan. 3—	Reimbursement to A. T. McCormack, M.D., to apply on Note No 2—		
	Payment on Building	\$ 8,415.29	
	Interest due on \$114,893.33	1,110.64	\$ 9,525.93
Feb. 28—	Reimbursement to A. T. McCormack, M.D., for balance on Note No. 2.	\$ 1,478.04	
	Interest due on \$106,478.04	662.53	\$ 2,140.57
Mar. 31—	Reimbursement to A. T. McCormack, M.D., to apply on Note No. 3—		
	Payment on Building	\$ 821.67	
	Interest due on \$105,000.00	478.33	\$ 1,300.00
June 30—	Reimbursement to A. T. McCormack, M.D., to apply on Note No. 3—		
	Payment on Building	\$ 4,730.37	
	Interest due on \$104,178.33	949.18	\$ 5,679.55
Total Amount Disbursed			

Total Amount Disbursed	\$24,246.05
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EXHIBIT M

SECRETARY'S MONTHLY BALANCE SHEET, AGREEING WITH BOOKS

1938			
Sept. 1—	Balance on hand (Checking Account) -----		\$ 1,151.47
	Balance on hand (McDowell Memorial Fund) -----		1,802.75
	Total Balance on Hand -----		\$ 2,954.22
		Disbursements	Collections
Oct. 1—	Association and Journal -----	\$ 1,104.15	\$ 1,682.86
Nov. 1—	Association and Journal -----	2,577.63	1,192.97
	J. N. McCormack Memorial Fund -----	446.85	446.85
	Rent -----	5,600.00	5,600.00
Dec. 1—	Association and Journal -----	1,980.47	413.34
			581.14

1939			
Jan. 1—	Association and Journal	890.00	1,069.66
Feb. 1—	Association and Journal	1,667.89	2,192.93
	Rent	9,525.93	9,525.93
Mar. 1—	Rent	2,140.57	2,140.57
	Association and Journal	1,047.89	1,997.87
Apr. 1—	Association and Journal	1,151.75	2,372.79
	McDowell Memorial Fund	100.00	
	Rent	1,300.00	1,300.00
May 1—	Association and Journal	983.40	3,745.34
June 1—	Association and Journal	1,099.89	944.43
	McDowell Memorial Fund	314.78	845.00
June 19—	Balance in National Bank of Cynthia Association and Journal transferred to The Kentucky Bank and Trust Company, Madisonville—Transfer Check No. 1		4,260.55
June 19—	Balance in National Bank of Cynthia McDowell Memorial Fund transferred to The Kentucky Bank and Trust Company, Madisonville—Transfer Check No. 3		2,232.97
July 1—	Rent	5,679.55	5,679.55
	Association and Journal	1,212.33	689.02
	McDowell Memorial Fund	3,580.05	600.00
Aug. 1—	Association and Journal	965.00	2,990.20
Sept. 1—	Association and Journal	1,028.40	2,025.20
			996.80
	Totals	\$44,396.53	\$42,439.11
	Balance on Hand, September 1, 1938:		
	Checking Account		\$ 1,151.47
	McDowell Memorial Fund		1,802.75
			\$45,393.33
	Balance on Hand, September 1, 1939:		
	Association and Journal		\$ 1,743.88
	McDowell Memorial Fund		747.08
	Net Checking Account Balance		996.80
	Total Disbursements as Above		\$44,396.53
			\$45,393.33

EXHIBIT N

McDOWELL MEMORIAL FUND

September 1, 1939

Balance agreeing with last report, Sept. 1, 1938—\$1,802.75

Receipts

Donations (Apothecary Shop) 1,445.00

Total to be accounted for \$3,247.75

Disbursements

150 McDowell Home Models \$ 150.00

Incidental Items for Restoration of Home 50.51

Incidental Items for Dedication 159.74

Postage and Express (Ephraim McDowell Home Models) 110.83

Telephone, L. D. 23.75

Purchase of Property (Doctor's Shop) 3,500.00 \$3,994.83

Overdrawn Balance Due Treasurer's

Checking Account \$—747.08

EPHRAIM McDOWELL MEMORIAL FUND

HOME AND APOTHECARY SHOP

Donors

September 1, 1938—September 1, 1939

MEMBERS OF KENTUCKY STATE MEDICAL ASSOCIATION

Irvin Abell, M.D., Louisville \$ 50.00

E. S. Allen, M.D., Louisville 50.00

John H. Blackburn, M.D., Bowling Green	50.00
D. S. Foyd, M.D., Danville	50.00
E. L. Henderson, M.D., Louisville	50.00
W. O. Johnson, M.D., Louisville	50.00
O. L. May, M.D., Danville	10.00
A. T. McCormack, M.D., Louisville	50.00
Fred Rankin, M.D., Lexington	50.00
John W. Scott, M.D., Lexington	100.00
V. A. Stilley, M.D., Benton	50.00
C. A. Vance, M.D., Lexington	50.00
	\$ 610.00

FELLOWS OF SOUTHERN SURGICAL ASSOCIATION

Arthur W. Allen, M.D., Boston, Mass.	\$ 50.00
V. P. Blair, M.D., St. Louis, Mo.	50.00
W. S. Elkin, M.D., Atlanta, Ga.	50.00
Robert T. Miller, Jr., M.D., Duxbury, Mass.	25.00
	175.00

FELLOWS OF AMERICAN COLLEGE OF SURGEONS

Robert E. Brennan, M.D., New York, N. Y.	\$ 50.00
H. T. Buckner, M.D., Seattle, Wash.	50.00
Herman L. Kretschmer, M.D., Chicago, Ill.	10.00
A. G. Nichol, M.D., Nashville, Tenn.	50.00
	160.00

AMERICAN GYNECOLOGICAL SOCIETY

500.00

Total Receipts \$1,445.00

EXHIBIT O

RECAPITULATION OF ALL DONATIONS McDOWELL MEMORIAL FUND

	Custodians	Donors	Total
Members of Kentucky State Medical Association	\$ 4,350.00	\$ 558.00	\$ 4,908.00
Fellows of Southern Surgical Association	3,075.00	350.00	3,425.00
Fellows of American College of Surgeons	2,260.00	1,317.00	3,577.00
Fellows of American College of Physicians	600.00	265.00	865.00
Members of Southeastern Surgical Congress	100.00	80.00	180.00
American Gynecological Society	500.00		500.00
Miscellaneous	300.00	215.88	515.88
Total	\$11,185.00	\$ 2,785.88	\$13,970.88

McDOWELL MEMORIAL FUND

Receipts and Expenditures, January 13, 1936, through August 31, 1939

EPHRAIM McDOWELL HOME

Donations \$11,220.88

Expenditures:

Purchase of Property	\$10,000.00
Interest on Notes	81.17
150 McDowell Home Models	150.00
Incidental Items for Restoration of Home	100.51
Incidental Items for Dedication	159.74
Postage and Express	553.84
Telephone, L. D.	23.75
Office Expense	60.23

Total Expenditures \$11,129.24

Balance \$ 91.64

DOCTOR'S SHOP

Donations -----	\$ 2,750.00	
Expenditures:		
Purchase of Property -----	\$ 3,500.00	
Postage -----	75.33	
Office and Other Expense -----	13.39	
Total Expenditures -----	\$ 3,588.72	
Balance -----		\$— 838.72
Total Balance -----		\$— 747 08

EPIRAIM McDOWELL MEMORIAL FUND
HOME AND APOTHECARY SHOP
CUSTODIANSMEMBERS OF KENTUCKY STATE MEDICAL
ASSOCIATION

Name	Address	Amount
Abell, Irvin, Louisville	-----	\$150.00
Allen, E. S., Louisville	-----	150.00
Armstrong, R. M., Lexington	-----	100.00
Bass, A. L., Louisville	-----	100.00
Bird, Clarence E., Louisville	-----	100.00
Blackburn, John H., Bowling Green	-----	150.00
Boyd, Frank, Paducah	-----	100.00
Brown, O. W., Falmouth	-----	100.00
Bullock, W. O., Lexington	-----	100.00
Cawood, W. P., Harlan	-----	100.00
Cowan, J. R., Danville	-----	100.00
Floyd, D. S., Danville	-----	150.00
Frank, Louis, Louisville	-----	100.00
Frey, E. S., Louisville	-----	100.00
Hall, D. P., Louisville	-----	100.00
Hanes, G. S., Louisville	-----	100.00
Henderson, E. L., Louisville	-----	150.00
Hendon, G. A., Louisville	-----	100.00
Henry, M. J., Louisville	-----	100.00
Heuser, J. Henry, Louisville	-----	100.00
Howard, C. C., Glasgow	-----	100.00
Jackson, John D., Danville	-----	100.00
Johnson, W. O., Louisville	-----	150.00
Jones, Preston J., Oneida	-----	100.00
Lukins, J. B., Louisville	-----	100.00
McCormack, A. T., Louisville	-----	150.00
Owen, W. B., Louisville	-----	100.00
Ozment, W. L., Leitchfield	-----	100.00
Rankin, Fred W., Lexington	-----	150.00
Reynolds, H. G., Paducah	-----	100.00
Scott, John W., Lexington	-----	100.00
Simpson, Gaihel L., Greenville	-----	100.00
Simpson, Virgil E., Louisville	-----	100.00
Smith, R. Emerson, Henderson	-----	100.00
South, John G., Frankfort	-----	100.00
South, L. H., Louisville	-----	100.00
Stilley, V. A., Benton	-----	150.00
Vance, C. A., Lexington	-----	150.00
Weldon, W. A., Glasgow	-----	50.00
		\$ 4,350.00

FELLOWS OF THE SOUTHERN SURGICAL
ASSOCIATION

Allen, A. W., Boston, Mass.	-----	\$150.00
Bailey, Fred W., St. Louis, Mo.	-----	100.00
Barnes, Frank L., Houston, Tex.	-----	100.00
Blair, V. P., St. Louis, Mo.	-----	150.00
Boland, Frank K., Atlanta, Ga.	-----	100.00
Campbell, Willis C., Memphis Tenn.	-----	100.00
Crawford, W. W., Hattiesburg, Miss.	-----	100.00
Crile, George W., Cleveland, Ohio	-----	100.00
Elkin, W. S., Atlanta, Ga.	-----	150.00
Flynn, Chas. W., Dallas, Tex.	-----	100.00
Gatch, W. D., Indianapolis, Ind.	-----	100.00
Guthrie, Donald, Sayre, Penn.	-----	100.00
Haggard, W. D., Nashville, Tenn.	-----	100.00
Kerr, H. H., Washington, D. C.	-----	100.00
Lewis, Dean, Baltimore, Md.	-----	100.00
Lower, Wm. E., Cleveland, Ohio	-----	100.00
Mastin, E. V., St. Louis, Mo.	-----	100.00
Miller, Robert T., Jr., Duxbury, Mass.	-----	125.00
Newell, Edward T., Chattanooga, Tenn.	-----	100.00
Novak, Emil, Baltimore, Md.	-----	100.00
Payne, Robert Lee, Norfolk, Va.	-----	100.00
Scott, A. C., Temple, Tex.	-----	100.00
Shands, H. R., Jackson, Miss.	-----	100.00
Shipley, Arthur M., Baltimore, Md.	-----	100.00
Singleton, Albert O., Galveston, Tex.	-----	100.00
Sullivan, Raymond P., New York City,	-----	
N. Y.	-----	100.00
Talley, D. F., Birmingham, Ala.	-----	100.00
Toland, C. G., Los Angeles, Calif.	-----	100.00
Winslow, Nathan, Baltimore, Md.	-----	100.00
		\$ 3,075.00

FELLOWS OF AMERICAN COLLEGE OF SURGEONS

Allenburger, C. A., Columbus, Nebr.	-----	\$100.00
Barnett, Charles E., St. Petersburg,	-----	
Fla.	-----	100.00
Brennan, Robert E., New York, N. Y.	-----	150.00

Buckner, Hubbard T., Seattle, Wash.	-----	150.00
Carraway, C. N., Birmingham, Ala.	-----	100.00
Conley, Dudley S., Columbia, Mo.	-----	100.00
Crotti, Andre, Columbus, Ohio	-----	100.00
Davis, Wm. T., Washington, D. C.	-----	100.00
Fort, R. E., Nashville, Tenn.	-----	100.00
Hagaman, Frank, Jackson, Miss.	-----	100.00
Hellman, Alfred M., New York, N. Y.	-----	100.00
Hill, J. A., Houston, Tex.	-----	100.00
Kellogg, John Harvey, Battle Creek,	-----	
Mich.	-----	100.00
Kretchmer, Herman L., Chicago, Ill.	-----	110.00
Mendillo, A. J., New Haven, Conn.	-----	100.00
Morley, W. H., Orchard Lake, Mich.	-----	100.00
Nichol, A. G., Nashville, Tenn.	-----	150.00
Pusey, Wm. Allen, Chicago, Ill.	-----	100.00
Rozar, A. R., Macon, Ga.	-----	100.00
Schlueter, Robert E., St. Louis, Mo.	-----	100.00
Wishard, W. N., Indianapolis, Ind.	-----	100.00
		\$ 2,260 00

FELLOWS OF AMERICAN COLLEGE OF
PHYSICIANS

Arneill, James Rae, Denver, Colo.	-----	100.00
Clendening, Logan, Kansas City, Mo.	-----	100.00
Howard, R. M., Oklahoma City, Okla.	-----	100.00
Libman, Emanuel, New York, N. Y.	-----	100.00
Plummer, H. S., Rochester, Minn.	-----	100.00
Rucker, M. Pierce, Richmond, Va.	-----	100.00
		\$ 600.00

MEMBERS OF SOUTHEASTERN SURGICAL
CONGRESS

Robinson, B. F., Lexington	-----	100.00
		\$ 100.00

AMERICAN GYNECOLOGICAL SOCIETY

American Gynecological Society,	-----	
Evanston, Ill.	-----	500.00
		\$ 500.00

MISCELLANEOUS

Missouri State Medical Association,	-----	
St. Louis, Mo.	-----	\$100.00
Pusey, Brown, Chicago, Ill.	-----	100.00
Wilson, Judge Samuel M., Lexington	-----	100.00
		\$ 300.00
Grand Total Custodians -----		\$11,185.00

EXHIBIT P

Total membership by Councilor Districts and by Counties for 1939 as compared to that of 1938.

FIRST DISTRICT—V. A. Stilley, Benton, Councilor

	1938	1939
Ballard	5	6
Caldwell	11	10
Jalloway	16	16
Carlisle	7	6
Crittenden	6	5
Fulton	15	13
Graves	21	20
Hickman	5	6
Livingston	7	8
Lyon	4	4
Marshall	8	11
McCracken	42	37
Trigg	1	4
	148	146

SECOND DISTRICT—D. M. Griffith, Owensboro,
Councilor

Daviss	36	37
Hancock	2	---
Henderson	15	17
Hopkins	17	17
McLean	---	6
Muhlenberg	15	14
Ohio	8	7
Union	3	3
Webster	8	8
	104	109

THIRD DISTRICT—C. C. TURNER, Glasgow, Councilor

Allen	7	7
Barren	20	19
Butler	3	3

Christian	29	31
Cumberland	6	6
Logan	16	15
Metcalfe	4	5
Monroe	2	2
Simpson	8	7
Warren-Edmonson	28	25
Todd	8	8
	131	138

FOURTH DISTRICT—J. I. Greenwell, New Haven,
Councilor

Breckinridge	7	6
Bullitt	7	6
Grayson	5	3
Hardin	22	20
Hart	7	6
Larue	3	3
Meade	--	1
Nelson	14	11
Spencer	1	1
	66	57

FIFTH DISTRICT—J. B. Lukins, Louisville, Councilor

Carroll	4	6
Franklin	22	26
Gallatin	1	2
Henry	6	5
Jefferson	408	411
Oldham	1	--
Owen	3	3
Shelby	16	17
Trimble	1	--
	462	470

SIXTH DISTRICT—W. B. Atkinson, Campbellsville,
Councilor

Adair	6	5
Anderson	5	7
Boyle	14	12
Green	6	6
Marion	9	9
Mercer	11	12
Taylor	7	7
Washington	7	7
	65	65

SEVENTH DISTRICT—Virgil Kinnaird, Lancaster,
Councilor

Casey	2	3
Clinton	3	3
Garrard	5	5
Lincoln	8	8
McCreary	8	7
Pulaski	17	18
Rockcastle	8	8
Russell	3	3
Wayne	5	5
	59	60

EIGHTH DISTRICT—L. C. HAFER, Covington, Councilor

Boone	6	5
Bracken-Pendleton	15	14
Campbell-Kenton	100	104
Fleming	8	8
Grant	12	10
Harrison	17	13
Mason	12	18
Nicholas	8	8
Robertson	3	3
	181	183

NINTH DISTRICT—Proctor Sparks, Ashland, Councilor

Boyd	36	40
Carter	9	10
Elliott	1	1
Floyd	9	15
Greenup	12	10
Johnson	10	11
Lawrence	8	9
Lewis	4	4
Magoffin	--	--
Martin	1	--
Pike	20	23
	110	123

TENTH DISTRICT—C. A. Vance, Lexington, Councilor

Bath	7	6
Bourbon	17	16
Breathitt	5	3
Clark	16	13

Estill	7	7
Fayette	113	119
Jessamine	7	5
Lee	3	3
Madison	33	32
Menifee	--	1
Montgomery	9	10
Morgan	2	2
Owsley	3	1
Powell	2	2
Rowan	6	6
Scott	10	13
Wolfe	5	5
Woodford	6	8
	251	252

ELEVENTH DISTRICT—H. K. Buttermore, Liggett,
Councilor

Bell	25	18
Clay	5	7
Harlan	37	46
Jackson	--	4
Knott	--	--
Knox	11	11
Laurel	9	9
Leslie	--	--
Letcher	25	26
Perry	29	30
Whitley	18	17

District Total	159	168
Grand Total	1,736	1,761

RECONCILIATION OF MEMBERSHIP AND DUES
COLLECTED FOR 1938-39

	Number	Rate	Amount
Current Year Dues	1,760	\$5.00	\$8,800.00
Current Year Dues	1	2.50	2.50
Total Current Year Dues	1,761		\$8,802.50

DELINQUENT DUES COLLECTED
DURING 1938-1939

FIRST DISTRICT

Ballard	1	\$5.00	\$ 5.00
Graves	2	5.00	10.00
Livingston	1	5.00	5.00
Trigg	1	5.00	5.00

SECOND DISTRICT

Hopkins	3	5.00	15.00
Union	1	5.00	5.00

THIRD DISTRICT

Todd	1	5.00	5.00
Warren-Edmonson	1	5.00	5.00

FOURTH DISTRICT

Spencer	1	5.00	5.00
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FIFTH DISTRICT

Franklin	1	5.00	5.00
Henry	1	5.00	5.00
Jefferson	34	5.00	170.00
Jefferson	10	2.50	25.00

SEVENTH DISTRICT

McCreary	1	5.00	5.00
Pulaski	1	2.08	2.08

EIGHTH DISTRICT

Campbell-Kenton	9	5.00	45.00
Mason	1	5.00	5.00

NINTH DISTRICT

Floyd	2	5.00	10.00
Greenup	1	5.00	5.00
Johnson	1	5.00	5.00
Pike	2	5.00	10.00

TENTH DISTRICT

Bourbon	2	5.00	10.00
Breathitt	1	5.00	5.00
Madison	2	5.00	10.00
Menifee	1	5.00	5.00
Montgomery	1	5.00	5.00

ELEVENTH DISTRICT

Harlan	2	5.00	10.00
Jackson	1	5.00	5.00
Knott	1	5.00	5.00
Letcher	1	5.00	5.00
Perry	6	5.00	30.00

Total Delinquent Dues Collected	94	\$ 442.08
Total Collections	1,855	\$9,244.58

1938			\$	
Sept. 30	Voucher Check No. 1	A. T. McCORMACK, M.D., Louisville		135.00
	To September salary, Secretary		135.00	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 2	L. H. SOUTH, M.D., Louisville		100.33
	To September salary, Business Manager		90.00	
	To expense—Reimbursement for Postgraduate Pediatric Meeting, County Society letters and mailing proof and other correspondence		10.33	
			100.33	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 3	J. F. BLACKERBY, Louisville		90.00
	To September services rendered Committee on Public Policy		90.00	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 4	ELVA GRANT, Louisville		75.00
	To September salary, Bookkeeper		75.00	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 5	ELIZABETH CONKLING, Louisville		50.00
	To September salary, Stenographer for Medico-Legal Committee		50.00	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 6	MARGARET C. HART, Louisville		50.00
	To honorarium for Medical Survey		50.00	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 7	W. B. ATKINSON, M.D., Campbellsville		36.55
	To expense as Councilor, 6th District		36.55	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 8	S. C. Smith, M.D., Ashland		18.40
	To expense as Councilor, 9th District		18.40	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 9	V. A. STILLEY, M.D., Benton		22.15
	To expense as Councilor, 1st District		22.15	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 10	PHILIP F. BARBOUR, M.D., Louisville		10.76
	To reimbursement for expenses of Pediatric Meeting at Corbin		10.76	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 11	P. WILLETT HAGAN, C. P. A., Louisville		50.00
	To auditing accounts of Marshall McDowell, M.D., Treasurer, and A. T. McCormack, M.D., Secretary, Kentucky State Medical Association, and Mrs. Luther Bach, Treasurer, Woman's Auxiliary, and Mrs. William H. Emrich, Business Manager, "The Quarterly," Woman's Auxiliary, for period from September 1, 1937, to August 31, 1938		50.00	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 12	Judge Rex Logan, P. M., Bowling Green		50.00
	To postage for Journal		50.00	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 13	LOUISVILLE POSTMASTER, Louisville		10.93
	To postage and postcards for July		6.26	
	To postage for August		4.67	
			10.93	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 14	E. H. ROEDERER, Louisville		3.25
	To 25 ribbons, "Past President," for State Meeting		3.25	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 15	BUSH-KREBS CO., Louisville		24.76
	To 7 sq. ft's of Portraits		24.76	
	Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30	Voucher Check No. 16	RAILWAY EXPRESS COMPANY, Louisville		5.88
	To express from Bowling Green, 7-5, 6 and 9-38 for Journal		1.33	
	To express to Bowling Green, 7-16-38, for Journal		1.04	
			2.37	
	To express from Cynthiana, 7-30-38, for Association		.42	
			2.79	
	To express from Bowling Green, 8-8, 9 and 13-38, for Journal		1.27	
	To express to Bowling Green, 8-16 and 22-38, for Journal		1.44	
			2.71	
	To express to Bellevue, 8-11-38, for Association		.38	
			3.09	
	Approved by Council and Ordered Paid by House of Delegates.			
			5.88	

Sept. 30—	Voucher Check No. 17 -----	59.92
	F. & V. MANUFACTURING CO., East Providence, R. I.	
	To 425 Bangles "Louisville 1938" -----	59.50
	Postage and Insurance -----	.42
		<u>59.92</u>
	Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—	Voucher Check No. 18 -----	12.50
	AMERICAN SURETY COMPANY, Louisville	
	To Treasurer Bond to Kentucky State Medical Association, No. 129554D for Dr. Marshall McDowell -----	12.50
	Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—	Voucher Check No. 19 -----	4.20
	SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville	
	To long distance calls for Association, as follows:	
	Corbin, 7-5-38 -----	1.05
	Covington, 8-1-38 -----	.70
	Cynthiana, 8-9-38 -----	.85
	Lexington, 8-10 and 11-38 -----	1.60
		<u>4.20</u>
	Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—	Voucher Check No. 20 -----	37.57
	COURIER JOURNAL JOB PRINTING CO., Louisville	
	To 2,500 inserts of photograph of W. E. Gardner, M.D., for annual number -----	37.00
	Postage and Insurance -----	.57
		<u>37.57</u>
	Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—	Voucher Check No. 21 -----	77.95
	LOUISE C. MOREL, Louisville	
	To traveling expenses, Supervisor, W. P. A. Medical Research Project, as follows:	
	Jackson, Danville, Stanford and Lexington, 7-6, 7 and 8-38 -----	13.80
	Lebanon, Greensburg, Danville, Stanford, and Lexington, 7-27, 28, and 29-38 --	21.65
	Richmond and Ashland, 8-22, 23, 24, and 25-38 -----	31.10
	Middlesboro and Lexington, 9-1 and 2-38 -----	9.25
	Frankfort, 9-13-38 -----	2.15
		<u>77.95</u>
	Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—	Voucher Check No. 22 -----	154.00
	THE TIMES JOURNAL PUBLISHING CO., Bowling Green	
	To 2,500 September issue—84 pages -----	621.00
	To inserts -----	5.00
	To 6 pt. tabular matter -----	45.00
	To setting up tables -----	8.00
		<u>679.00</u>
	Less credit by check No. 184 dated 8-31-38 -----	450.00
	Less credit by 1st payment on note of \$1,400.00 -----	75.00
		<u>154.00</u>
	Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—	Voucher Check No. 23 -----	25.00
	WALLACE FACE, Louisville	
	To old medical books -----	25.00
	Approved by Council and Ordered Paid by House of Delegates.	
Oct. 1—	Voucher Check No. 25 -----	109.15
	C. A. VANCE, M.D., Lexington	
	To expense as Councilor, 10th District -----	109.15
	Approved by Council and Ordered Paid by House of Delegates.	
Oct. 1—	Voucher Check No. 26 -----	20.30
	D. M. GRIFFITH, M.D., Owensboro	
	To expense as Councilor, 2nd District -----	20.30
	Approved by Council and Ordered Paid by House of Delegates.	
Oct. 1—	Voucher Check No. 30 -----	23.55
	V. A. STILLEY, M.D., Benton	
	To expense as Councilor, 1st District -----	23.55
	Approved by Council and Ordered Paid by House of Delegates.	
Oct. 6—	Voucher Check No. 25A -----	439.00
	THE TIMES JOURNAL PUBLISHING CO., Bowling Green	
	To 2,200 October issue—60 pages -----	419.00
	To 1M Programs for annual meeting—32 pages -----	95.00
		<u>514.00</u>
	Less credit by 2nd payment on note of \$1,400.00 -----	75.00
		<u>439.00</u>
	Approved by Council and Ordered Paid by House of Delegates.	
Oct. 8—	Voucher Check No. 24 -----	5,600.00
	A. T. McCORMACK, M.D., Louisville	
	To reimbursement made on building located at 620 S. Third St., as follows:	
	Payment on principal of note due 9-1-39 -----	5,106.67
	Interest due on \$120,000.00 from 9-1-10-8-38 -----	493.33
		<u>5,600.00</u>
	Approved by Council and Ordered Paid by House of Delegates.	

Oct. 8—	Voucher Check No. 27 -----		1.57
	MEFFERT EQUIPMENT CO., Louisville		
	To 1 set 4x6 A-Z Celluloid Index Cards -----	1.00	
	Less 15% -----	.15	.85
	To 50 4x6 1-3 Cut Blue Guide Cards -----	.50	
	To 2 pkgs. 1-3 Plain White Sheets -----	.30	
		.80	
	Less 10% -----	.08	.72
			1.57
	Approved by Council and Ordered Paid by House of Delegates.		
Oct. 8—	Voucher Check No. 28 -----		4.93
	BUSH-KREBS CO., Louisville		
	To 1 sq. halftone of Dr. J. N. McCormack -----	4.93	
	Approved by Council and Ordered Paid by House of Delegates.		
Oct. 8—	Voucher Check No. 29 -----		1.10
	ELECTRIC BLUE PRINT & SUPPLY CO., Louisville		
	To 2 sheets 28x44 White Show Card Board -----	.50	
	To 2 sheets 28x44 Pebbled Bond Buff and White -----	.60	
			1.10
	Approved by Council and Ordered Paid by House of Delegates.		
Oct. 31—	Voucher Check No. 31 -----		135.00
	A. T. McCORMACK, M.D., Louisville		
	To October salary, Secretary -----	135.00	
Oct. 31—	Voucher Check No. 32 -----		90.00
	L. H. SOUTH, M.D., Louisville		
	To October salary, Business Manager -----	90.00	
Oct. 31—	Voucher Check No. 33 -----		90.00
	J. F. BLACKERBY, Louisville		
	To October services rendered Committee on Public Policy -----	90.00	
Oct. 31—	Voucher Check No. 34 -----		100.05
	ELVA GRANT, Louisville		
	To October salary, Bookkeeper -----	75.00	
	To honorarium -----	20.00	
	To State Meeting expense -----	5.05	
			100.05
Oct. 31—	Voucher Check No. 35 -----		50.00
	ELIZABETH CONKLING, Louisville		
	To October salary, Stenographer for Medico-Legal Committee -----	50.00	
Oct. 31—	Voucher Check No. 36 -----		25.00
	V. A. STILLEY, M.D., Benton		
	To expense as Councilor, 1st District -----	25.00	
Oct. 31—	Voucher Check No. 37 -----		20.55
	S. C. SMITH, M.D., Ashland		
	To expense as Past Councilor, 9th District -----	20.55	
Oct. 31—	Voucher Check No. 38 -----		34.10
	THE PENDENNIS CLUB, Louisville		
	To 22 plates @ \$1.55 per plate for Council Luncheon, Sept. 11 -----	34.10	
Oct. 31—	Voucher Check No. 39 -----		126.90
	THE BROWN HOTEL, Louisville		
	To 9 plates @ \$1.25 per plate for Council Luncheon, October 3 -----	11.25	
	To 113 plates @ 85c per plate for Woman's Auxiliary Luncheon, October 5 -----	96.05	
	To Service, October 3, 4, and 5 -----	19.60	
			126.90
Oct. 31—	Voucher Check No. 40 -----		12.26
	LOUISVILLE POSTMASTER, Louisville		
	To stamps for September -----	12.26	
Oct. 31—	Voucher Check No. 41 -----		3.96
	RAILWAY EXPRESS AGENCY, Louisville		
	To express to Bowling Green, 9-15-38, for Journal -----	1.05	
	To express from Bowling Green, 9-6, 9 and 26-38, for Journal -----	2.16	
	To express from Bowling Green, 9-30-38, for Association -----	.75	
			3.96
Oct. 31—	Voucher Check No. 42 -----		1.69
	THE WESTERN UNION TELEGRAPH COMPANY, Louisville		
	To telegrams for State Meeting, as follows.		
	Chicago, 9-21-38 -----	.63	
	New York, 9-27-38 -----	.64	
	Boston, 9-29-38 -----	.42	
			1.69
Oct. 31—	Voucher Check No. 43 -----		54.00
	COURIER-JOURNAL JOB PRINTING CO., Louisville		
	To 4M Membership Cards Litho and Printed -----	54.00	
Oct. 31—	Voucher Check No. 44 -----		35.00
	M. I. BEELER, Shecklers Theatre Equipment, Louisville		
	To rental of Projector and Screen with Operator, Brown Hotel, October 3, and showing at 620 S. Third, October 4 -----	30.00	
	To special screen used October 4 -----	5.00	
			35.00
Oct. 31—	Voucher Check No. 45 -----		54.00
	WM. J. RUEFF, Louisville		
	To furnishing and erecting 11 booths -----	44.00	
	To lettering 10 headboards -----	10.00	
			54.00

Oct. 31—Voucher Check No. 46	230.23
SMITH DISTRIBUTING CO., Louisville	
To 1 P. G. 114,24 Watt Portable Amplifier	179.70
To 1 MI—4123 Remote Mixing Unit	14.55
To 1 MI—4685 50 foot Extension Cable	6.96
To 1 MI—6226 Aerodynamic Microphone	13.77
To 1 Turner "Third Hand" Breast Mtg.	4.25
To 2 50-foot Microphone Extension Cords	8.00
To 2 50-foot Speaker Extension Cords	3.00
	230.23
Oct. 31—Voucher Check No. 47	23.70
ELIZABETH S. G. THOMAS, Louisville	
To State Meeting expense	3.70
To honorarium	20.00
	23.70
Oct. 31—Voucher Check No. 48	439.50
BRAKMEIER BROS., Louisville	
To 1 Bronze Tablet with Bas-relief of Dr. J. N. McCormack, etc.	425.00
To rental on spotlight and 2 pieces of velvet and arranging portrait on easel and tablet for unveiling, etc.	10.00
To making 2 brass hooks to hold oil painting and erecting picture on wall	4.50
	439.50
(Dedication of Building—J. N. McCormack Memorial Expense)	
Oct. 31—Voucher Check No. 49	7.35
CAUFIELD & SHOOK, Louisville	
To 2 original photographs	6.85
To 1 reprint photograph	.50
(Girl unveiling bronze tablet and painting of Dr. J. N. McCormack Copy Painting of Dr. J. N. McCormack, Bronze tablet of Dr. J. N. McCormack)	
	7.35
(Dedication of Building—J. N. McCormack Memorial Expense)	
Oct. 31—Voucher Check No. 50	49.34
MAYME SULLIVAN, Louisville	
To reimbursement for telegram to New Orleans, 7-12-38	.64
To State Meeting expense for self, assistant, machine operator, and night watchman	28.70
	49.34
Oct. 31—Voucher Check No. 51	20.00
RAY WUNDERLICK, Louisville	
To honorarium	20.00
Oct. 31—Voucher Check No. 52	21.25
MARY LYNN WAITE, Louisville	
To State Meeting expense	1.25
To honorarium	20.00
	21.25
Oct. 31—Voucher Check No. 53	20.00
OTHO HASKINS, Louisville	
To honorarium	20.00
Oct. 31—Voucher Check No. 54	20.00
KATHERINE HABICH, Louisville	
To honorarium	20.00
Oct. 31—Voucher Check No. 55	761.00
THE TIMES-JOURNAL PUBLISHING CO., Bowling Green	
To 2,750 November issue—104 pages	826.00
To 6 pt. tabular	10.00
	836.00
Less 3rd payment on note of \$1,400.00	75.00
	761.00
Nov. 30—Voucher Check No. 56	135.00
A. T. McCORMACK, M.D., Louisville	
To November salary, Secretary	135.00
Nov. 30—Voucher Check No. 57	100.00
L. H. SOUTH, M.D., Louisville	
To November salary, Business Manager	90.00
To reimbursement for postage on County Medical Society letters for M. G. Spradlin, M.D., Somerset—Meeting, 11-4-38	10.00
	100.00
Nov. 30—Voucher Check No. 58	90.00
J. F. BLACKERBY, Louisville	
To November services rendered Committee on Public Policy	90.00
Nov. 30—Voucher Check No. 59	75.00
ELVA GRANT, Louisville	
To November salary, Bookkeeper	75.00
Nov. 30—Voucher Check No. 60	13.60
M. McDOWELL, M.D., Cynthiana	
To expense as Treasurer	13.60
Nov. 30—Voucher Check No. 61	32.20
V. A. STILLEY, M.D., Benton	
To expense as Councilor, 1st District	32.20
Nov. 30—Voucher Check No. 62	48.50
H. K. BUTTERMORE, M.D., Liggett	
To expense as Councilor, 11th District	48.50
Nov. 30—Voucher Check No. 63	108.93
FRANK H. LAHEY, M.D., Boston, Mass.	
To expense as Guest Speaker at State Meeting	108.93

Nov. 30—Voucher Check No. 64 -----			10.90
CHARLES D. ARNETT, Secretary of State, Frankfort			
To certification charge for 4 copies of the Articles of Incorporation of the Kentucky State Medical Association, filed 5-14-29 and to attesting 1 copy under seal ----	10.90		
Nov. 30—Voucher Check No. 65 -----			49.54
LOUISVILLE POSTMASTER, Louisville			
To stamps and postcards for October -----	49.54		
Nov. 30—Voucher Check 59-A -----			50.00
ELIZABETH CONKLING, Louisville			
To November salary, Stenographer for Medico-Legal Committee -----	50.00		
Nov. 30—Voucher Check No 66 -----			54.21
LOUISE C. MOREL, Louisville			
To traveling expenses, Supervisor Medical Research Project, as follows:			
Frankfort, 10-1-38 -----	2.09		
Lexington and Richmond, 10-11, 12, 13, 14-38 -----	26.37		
Ashland, Middlesboro, Lexington, Danville, and Stanford, 11-9, 10, 12, 14, 15-38----	25.75		
	54.21		
Nov. 30—Voucher Check No. 67 -----			4.90
H. HESSE, Louisville			
To 1 Neg.—6 Pos. of Charter to the Harrison County Medical Society -----	4.90		
Nov. 30—Voucher Check No. 68 -----			3.00
BUSH-KREBS CO., Louisville			
To 1 sq. copper HT of Portrait, 2¼x3 in. -----	3.00		
Nov. 30—Voucher Check No. 69 -----			2.78
MEFFERT EQUIPMENT CO., Louisville			
To 2 No. 548 Index Books -----	.40		
Less 10% -----	.04	.36	
To 1 No. 706 ½ Ring Book -----	2.85		
Less 15% -----	.43	2.42	
		2.78	
Nov. 30—Voucher Check No. 70 -----			4.71
RAILWAY EXPRESS AGENCY, Louisville			
To express from Bowling Green, 10-1 and 3-38, for Journal -----	1.14		
To express to Bowling Green, 10-15-38, for Journal -----	1.05		
To express to New York, 10-17-38, for State Meeting -----	2.14		
To express to Chicago, 10-25-38, for Association -----	.38		
Nov. 30—Voucher Check No. 71 -----			2.08
THE WESTERN UNION TELEGRAPH CO., Louisville			
To telegrams, as follows:			
Errand to 1433 S. Third, 10-1-38, for State Meeting -----	.40		
Washington, D. C., 10-14-38, for Journal -----	.60		
Washington, D. C., 10-29-38, for Association -----	1.08		
	2.08		
Nov. 30—Voucher Check No. 72 -----			12.85
SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville			
To long distance calls, as follows:			
Lexington, 8-29 and 30-38, for Association -----	.95		
Bowling Green, 9-23-38, for Journal -----	.85		
Washington, D. C., 9-25-38, for Association -----	3.05	4.85	
Lexington, 9-29-38, for State Meeting -----	1.05		
Bowling Green, 9-29-38 (2), for Journal -----	1.95		
Cincinnati, Ohio, 9-30-38 (reverse call), for Association -----	.80		
Nashville, Tenn., 10-12-38 (reverse call), for Association -----	.85		
Lexington, 10-13-38 (reverse call), for Association -----	.80		
Bowling Green, 10-20, 21 and 25-38, for Journal -----	2.55	8.00	
		12.85	
Nov. 30—Voucher Check No. 73 -----			3.50
BRAKMEIER BROS., Louisville			
To 1 woodcut of Signature and Stamp -----	3.50		
Nov. 30—Voucher Check No. 74 -----			10.00
R. B. WHALEY, Cynthiana			
To flowers for J. E. Wells, M.D. -----	10.00		
Nov. 30—Voucher Check No. 75 -----			597.97
THE MASTER REPORTING COMPANY, INC., New York			
To reporting meeting of the Association at Louisville, October 3-6, 1938:			
House of Delegates:			
705 folios original transcript @ 30c -----	211.50		
705 folios carbon copies @ 4c -----	28.20		
Opening Session:			
23.5 folios original transcript @ 30c -----	7.05		
23.5 folios carbon copies @ 4c -----	.94		
Abridged Sessions:			
7 sessions @ \$5.00 -----	35.00		
Scientific Sessions:			
706 folios original transcript @ 30c -----	211.80		
706 folios carbon copies @ 4c -----	28.24		
	522.73		
Traveling expenses -----	70.31		
Express charges and postage -----	4.93		
		597.97	

Nov. 30—	Voucher Check No. 76 -----		570.90
	THE TIMES-JOURNAL PUBLISHING CO., Bowling Green		
	To 2,750 November issue—120 pages -----	950.00	
	Less credit—Check No. 55 dated 10-31-38—2,750 November issue—104 pages -----	836.00	
		114.00	
	To 2,200 December issue—72 pages with index -----	497.00	
		611.00	
	Less 4th payment on note of \$1,400.00 -----	75.00	
		536.00	
	To letterheads and envelopes, as follows:		
	Dr. W. E. Gardner, President -----500 each	5.00	
	Dr. John W. Scott, President-Elect -----300 each	3.50	
	Dr. J. Duffy Hancock, Vice-President -----300 each	3.50	
	Dr. C. A. Vance, Chairman of Council -----750 each	7.00	
	Dr. J. B. Lukins, Chairman, Medico-Legal Committee -----500 each	5.00	
	Dr. W. B. Atkinson, Councilor, 6th D's rict -----500 each	5.00	
	Dr. Proctor Sparks, Councilor, 9th District -----300 each	3.50	
		32.50	
	To express on 7 pkgs. -----	2.30	34.80
			570.80
Dec. 21—	Voucher Check No. 77 -----		135.00
	A. T. McCORMACK, M.D., Louisville		
	To December salary, Secretary -----	135.00	
Dec. 21—	Voucher Check No. 78 -----		90.00
	L. H. SOUTH, M.D., Louisville		
	To December salary, Business Manager -----	90.00	
Dec. 21—	Voucher Check No. 79 -----		90.00
	J. F. BLACKERBY, Louisville		
	To December services rendered Committee on Public Policy -----	90.00	
Dec. 21—	Voucher Check No. 80 -----		75.00
	ELVA GRANT, Louisville		
	To December salary, Bookkeeper -----	75.00	
Dec. 21—	Voucher Check No. 81 -----		50.00
	ELIZABETH CONKLING, Louisville		
	To December salary, Stenographer for Medico-Legal Committee -----	50.00	
Dec. 21—	Voucher Check No. 82 -----		450.00
	THE TIMES-JOURNAL PUBLISHING CO., Bowling Green		
	To account of January Journal -----	450.00	
1939			
Jan. 5—	Voucher Check No. 83 -----		9,525.93
	A. T. McCORMACK, M.D., Louisville		
	To reimbursement for rent on building located at 620 S. Third, Louisville:		
	Payment on principal to 1-5-39 -----	8,415.29	
	Interest to 1-5-39 -----	1,110.64	
		9,525.93	
Jan. 31—	Voucher Check No. 84 -----		135.00
	A. T. McCORMACK, M.D., Louisville		
	To January salary, Secretary -----	135.00	
Jan. 31—	Voucher Check No. 85 -----		92.37
	L. H. SOUTH, M.D., Louisville		
	To January salary, Business Manager -----	90.00	
	To expense, 10-25-38:		
	Express on Flood Film from Kansas City—Louisville -----	1.37	
	Cartage (from Hotel to Station, to Office and to Express Department) -----	1.00	2.37
			92.37
Jan. 31—	Voucher Check No. 86 -----		90.00
	J. F. BLACKERBY, Louisville		
	To January services rendered Committee on Public Policy -----	90.00	
Jan. 31—	Voucher Check No. 87 -----		75.00
	ELVA GRANT, Louisville		
	To January salary, Bookkeeper -----	75.00	
Jan. 31—	Voucher Check No. 88 -----		50.00
	ELIZABETH CONKLING, Louisville		
	To January salary, Stenographer for Medico-Legal Committee -----	50.00	
Jan. 31—	Voucher Check No. 89 -----		61.05
	LOUISE MOREL, Louisville		
	To traveling expenses, Supervisor, Medical Research Project, as follows:		
	12-1—8-38—Trip from Baltimore to Boston and expenses while in New York		
	and Boston (cost of trip from Louisville to Baltimore to attend meeting,		
	paid by Miss Morel) -----	41.25	
	12-27—28-38—Trip to Danville and Stanford -----	10.30	
	1-12—13-39—Trip to Lexington -----	9.50	
		61.05	
Jan. 31—	Voucher Check No. 90 -----		150.00
	CURTIS & CURTIS, Attorneys, Louisville		
	To legal services rendered, 7-1—12-31-38 -----	150.00	
Jan. 31—	Voucher Check No. 91 -----		16.24
	MAYME SULLIVAN, Louisville		
	To reimbursement for the following:		
	10-3-38—Taxi to Brown to take Picture Machine -----	.15	
	11-5-38—Wire from Dr. Gardner to Dr. Abell, Notre Dame University -----	2.02	
	11-29-38—Webster's International Dictionary -----	20.00	
	Less 30% and 2% -----	6.28	
		13.72	
	Postage -----	.35	14.07
			16.24

Jan. 31—Voucher Check No. 92 -----			50.00
JUDGE REX LOGAN, P.M., Bowling Green -----			
To postage for Journal -----	50.00		
Jan. 31—Voucher Check No. 93 -----			19.35
LOUISVILLE POSTMASTER, Louisville -----			
To stamps for November -----	4.84		
To stamps for December -----	14.51		
		19.35	
Jan. 31—Voucher Check No. 94 -----			6.00
CAUFIELD & SHOOK, Louisville -----			
To 4 photographs (exterior views of Kentucky State Medical Association and State Board of Health Building) -----	6.00		
Jan. 31—Voucher Check No. 95 -----			60.86
BUSH-KREBS CO., Louisville -----			
To 3 sq. HT's Views of Dr. McCormack, Memorial, etc. -----	20.70		
To retouching photograph of exterior of building and HT of same -----	12.12		
To 3 sq. copper HT's of Portraits of Dr. McCormack, etc. -----	19.37		
To 2 sq. copper HT's of Portraits of Governor Chandler and Dr. Duffy Hancock --	8.67		
		60.86	
Jan. 31—Voucher Check No. 96 -----			6.42
RAILWAY EXPRESS AGENCY, Louisville -----			
To express from Bowling Green, 11-15-38 -----	3.01		
To express to Bowling Green, 11-17-38 -----	1.07	4.08	
To express from Bowling Green, 12-7 and 9-38 -----	1.29		
To express to Bowling Green, 12-14-38 -----	1.05	2.34	
		6.42	
Jan. 31—Voucher Check No. 97 -----			15.70
SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville -----			
To long distance calls, as follows:			
Journal:			
11-2-38—Bowling Green (2) -----		1.95	
Association:			
11-2-38—Hopkinsville, Glasgow, Lexington, and Frankfort -----	3.35		
11-4-38—Lexington (2), Frankfort -----	4.20		
11-22-38—Frankfort, Lexington (2) -----	2.45	10.00	
		11.95	
Journal:			
12-3 and 23-38—Bowling Green -----	1.70		
Association:			
12-13-38—Lexington -----	.80		
12-17-38—Frankfort -----	1.25	3.75	
		15.70	
Jan. 31—Voucher Check No. 98 -----			85.00
THE STATE MEDICAL SOCIETY OF WISCONSIN, Madison, Wisconsin -----			
To 100 copies of Sickness Insurance in Europe -----	85.00		
Jan. 31—Voucher Check No. 99 -----			27.90
THE PENDENNIS CLUB, Louisville -----			
To 2 dinner meetings of Committee on Nervous and Mental Diseases -----	27.90		
Jan. 30—Voucher Check No. 100 -----			727.00
THE TIMES-JOURNAL PUBLISHING CO., Bowling Green -----			
To 2,300 December issue—76 pages -----	538.00		
Less credit by Check No. 76 dated 11-30-38—2,200 December issue—			
72 pages with Index -----	497.00	41.00	
To 2,275 January issue—68 pages -----	472.00		
—Less credit by Check No. 82 dated			
12-21-38 for payment on account -----	450.00	22.00	
To 300 envelopes and 300 letterheads, Dr. C. C. Turner, Councilor, 3rd District -----		3.50	
To 300 envelopes and 300 letterheads, Dr. W. F. Pryor, Secretary, Eye, Ear, Nose and Throat Section -----		3.50	
To 200 envelopes and 200 letterheads, Dr. Claude Wolfe, President, Eye, Ear, Nose, and Throat Section -----		3.00	
		73.00	
To 2,300 February issue—72 pages -----		504.00	
To supplement to February Journal -----		300.00	
		877.00	
Less 5th and 6th payments on note of \$1,400.00 -----		150.00	
		727.00	
Feb. 28—Voucher Check No. 101 -----			2,140.57
A. T. McCORMACK, M.D., Louisville -----			
To reimbursement for rent on building located at 620 S. Third, Louisville, as follows:			
Balance on principal note due 9-1-39 -----	1,478.04		
4% interest on \$106,478.04 from 1-4-38-1-39 -----	662.53		
		2,140.57	
Feb. 28—Voucher Check No. 102 -----			135.00
A. T. McCORMACK, M.D., Louisville -----			
To February salary, Secretary -----	135.00		
Feb. 28—Voucher Check No. 103 -----			90.00
L. H. SOUTH, M.D., Louisville -----			
To February salary, Business Manager -----	90.00		
Feb. 28—Voucher Check No. 104 -----			90.00
J. F. BLACKERBY, Louisville -----			
To February services rendered Committee on Public Policy -----	90.00		

Feb. 28—	Voucher Check No. 105	ELVA GRANT, Louisville		75.00	75.00
	To February salary, Bookkeeper		75.00		
Feb. 28—	Voucher Check No. 106	ELIZABETH CONKLING, Louisville		50.00	50.00
	To February salary, Stenographer for Medico-Legal Committee		50.00		
Feb. 28—	Voucher Check No. 107	LOUISVILLE POSTMASTER, Louisville		96.64	96.64
	To postage for January		96.64		
Feb. 28—	Voucher Check No. 108	SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville		5.45	5.45
	To long distance calls, as follows:				
	1-4 (2), 9 and 20-39—Bowling Green, for Journal		3.40		
	1-6-39—Elizabethtown, and 1-24-39—Frankfort, for Association		2.05		
			5.45		
Feb. 28—	Voucher Check No. 109	RAILWAY EXPRESS AGENCY, Louisville		2.50	2.50
	To express on packages from Bowling Green, 1-13, 17, and 27-39		1.43		
	To express on packages to Bowling Green, 1-17		1.07		
			2.50		
Feb. 28—	Voucher Check No. 110	PREMIER PAPER COMPANY, Louisville		18.30	18.30
	To 10M No. 10 Sub. 24-lb. Premier Regular Envelopes		18.30		
Feb. 28—	Voucher Check No. 111	THE TIMES-JOURNAL PUBLISHING CO., Bowling Green		485.00	485.00
	To 2,300 March issue—68 pages		475.00		
	To 2,500 letterheads, Secretary		10.00		
			485.00		
Mar. 31—	Voucher Check No. 112	A. T. McCORMACK, M.D., Louisville		135.00	135.00
	To March salary, Secretary		135.00		
Mar. 31—	Voucher Check No. 113	L. H. SOUTH, M.D., Louisville		90.00	90.00
	To March salary, Business Manager		90.00		
Mar. 31—	Voucher Check No. 114	J. F. BLACKERBY, Louisville		90.00	90.00
	To March services rendered Committee on Public Policy		90.00		
Mar. 31—	Voucher Check No. 115	ELVA GRANT, Louisville		75.00	75.00
	To March salary, Bookkeeper		75.00		
Mar. 31—	Voucher Check No. 116	ELIZABETH CONKLING, Louisville		50.00	50.00
	To March salary, Stenographer for Medico-Legal Committee		50.00		
Mar. 31—	Voucher Check No. 117	LOUISVILLE POSTMASTER, Louisville		14.42	14.42
	To February postage		14.42		
Mar. 31—	Voucher Check No. 118	HUNT, BUSH & LISLE, Lexington		150.00	150.00
	To fee for legal services rendered, October, 1938—February, 1939, in case of "Joseph Edgar Edelen's Administratrix vs. Dr. George P. Sprague, et al.," Fayette Circuit Court—interviewing defendants and employee witnesses and taking statements; filing necessary pleadings; preparation of case for trial; and negotiations resulting in settlement of case		150.00		
Mar. 31—	Voucher Check No. 119	MINISH & POTTS, Louisville		6.50	6.50
	To box flowers (McDowell), 2-7-39		6.50		
Mar. 31—	Voucher Check No. 120	LOUISE C. MOREL, Louisville		8.75	8.75
	To traveling expenses, Supervisor, Medical Research Project, as follows:				
	2-2—3-39—Trip to Lexington		8.75		
Mar. 31—	Voucher Check No. 121	RAILWAY EXPRESS AGENCY, Louisville		3.18	3.18
	To express for Journal, as follows:				
	From Bowling Green, 2-1, 11, and 15-39		1.76		
	To Key West, Florida, 2-10-39		.40		
	To Bowling Green, 2-15-39		1.02		
			3.18		
Mar. 31—	Voucher Check No. 122	PREMIER PAPER COMPANY, Louisville		153.60	153.60
	To 30M 8 3/4 x 11 1/4—24 lbs. Manila Catalog Envelopes—ungummed flaps—printed per copy @ \$5.12 per M		153.60		
Mar. 31—	Voucher Check No. 123	SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville		6.80	6.80
	To long distance calls, as follows:				
	Association:				
	Lexington, 1-27 and 30-39		2.35		
	Madisonville, 1-27 and 2-13-39		1.90		
	New Haven, 2-19-39		.50		
	Lancaster, 2-19-39		.60		
	Campbellsville, 2-19-39		.60		
	Journal:				
	Bowling Green, 1-30-39		.85		
			6.80		
Mar. 31—	Voucher Check No. 124	FRED HAUP, Louisville		10.50	10.50
	To design for R. C. McChord, M.D., including delivery, 2-20-39		10.50		
Mar. 31—	Voucher Check No. 125	THE TIMES-JOURNAL PUBLISHING CO., Bowling Green		358.00	358.00
	To 2,325 April issue—72 pages		508.00		
	Less 7th and 8th payments on note of \$1,400.00		150.00		
			858.00		

Mar. 31—Voucher Check No. 126	1,300.00	
A. T. McCORMACK, M.D., Louisville		
To reimbursement for rent on building located at 620 S. Third, Louisville:		
Payment on principal of note due September 1, 1940	821.67	
Interest from March 1—April 10, 1939	478.33	
	<u>1,300.00</u>	
Mar. 31—Voucher Check No. 127		100.00
H. W. PETERS, State Superintendent of Public Instruction, Frankfort		
To 100 McDowell models to be sent to each of the custodians of the McDowell Fund		
(McDowell Fund expense)	100.00	
Apr. 29—Voucher Check No. 128		135.00
A. T. McCORMACK, M.D., Louisville		
To April salary, Secretary	135.00	
Apr. 29—Voucher Check No. 129		90.00
L. H. SOUTH, M.D., Louisville		
To April salary, Business Manager	90.00	
Apr. 29—Voucher Check No. 130		90.00
J. F. BLACKERBY, Louisville		
To April services rendered Committee on Public Policy	90.00	
Apr. 29—Voucher Check No. 131		87.65
ELVA GRANT, Louisville		
To April salary, Bookkeeper	75.00	
To expense of trip to Bowling Green, 4-11-39:		
Transportation	12.40	
Lunch	.25	12.65
	<u>87.65</u>	
Apr. 29—Voucher Check No. 132		50.00
ELIZABETH CONKLING, Louisville		
To April salary, Stenographer for Medico-Legal Committee	50.00	
Apr. 29—Voucher Check No. 133		50.00
JUDGE REX LOGAN, P. M., Bowling Green		
To postage for Journal	50.00	
Apr. 29—Voucher Check No. 134		20.63
LOUISVILLE POSTMASTER, Louisville		
To postage for March	20.63	
Apr. 29—Voucher Check No. 135		10.06
LOUISE C. MOREL, Louisville		
To traveling expenses, Supervisor, Medical Research Project, as follows:		
3-13-15-39—Trip to Lexington	10.06	
Apr. 29—Voucher Check No. 136		11.87
BUSH-KREBS CO., Louisville		
To 3 sq. H's Medical Subjects	11.87	
Apr. 29—Voucher Check No. 137		2.14
RAILWAY EXPRESS AGENCY, Louisville		
To express for Journal, as follows:		
From Bowling Green, 3-8 and 9-39	1.11	
To Bowling Green, 3-15-39	1.03	
	<u>2.14</u>	
Apr. 29—Voucher Check No. 138		7.05
SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville		
Association:		
Falmouth, 3-4-39	.85	
Ashland and Lexington, 3-13-39	3.40	
Glasgow and Frankfort, 3-14-39	1.95	6.20
Journal:		
Bowling Green, 3-23-39	.85	
	<u>7.05</u>	
Apr. 29—Voucher Check No. 139		429.00
THE TIMES-JOURNAL PUBLISHING CO., Bowling Green		
To 2,300—72. Page May issue	504.00	
Less 9th payment on principal of note for \$1,400.00	75.00	
	<u>429.00</u>	
May 31—Voucher Check No. 140		221.30
A. T. McCORMACK, M.D., Louisville		
To May salary, Secretary	135.00	
To expense to A. M. A. Meeting at St. Louis, 5-15-19-39	76.25	
To expense of trip to Danville and return, McDowell Dedication, 5-20-39	10.05	86.30
	<u>221.30</u>	
May 31—Voucher Check No. 141		104.00
L. H. SOUTH, M.D., Louisville		
To May salary, Business Manager	90.00	
To reimbursement for the following:		
Postage on letters for 9th District Medical Society Meeting, 5-2-39, at		
Ashland	6.00	
Postage for programs for 10th District Medical Society Meeting, Lexington, 5-25-39	8.00	14.00
	<u>104.00</u>	
May 31—Voucher Check No. 142		90.00
J. F. BLACKERBY, Louisville		
To May services rendered Committee on Public Policy	90.00	
May 31—Voucher Check No. 143		87.40
ELVA GRANT, Louisville		
To May salary, Bookkeeper	75.00	
To expense of trip to Bowling Green and return, 4-25 and 26-39:		
Transportation	12.40	
	<u>87.40</u>	

May 31	Voucher Check No. 144	50.00	
	ELIZABETH CONKLING, Louisville		
	To May salary, Stenographer for Medico-Legal Committee	50.00	
May 31	Voucher Check No. 145	22.35	
	V. A. STILLEY, M.D., Benton		
	To expense as Councilor, 1st District	22.35	
May 31	Voucher Check No. 146	2.18	
	RAILWAY EXPRESS AGENCY, Louisville		
	To express for Journal, as follows:		
	To Bowling Green, 4-15-39	1.04	
	From Bowling Green, 4-13 and 25-39	1.14	
		2.18	
May 31	Voucher Check No. 147	7.68	
	LOUISVILLE POSTMASTER, Louisville		
	To postage for April	7.68	
May 31	Voucher Check No. 148	26.60	
	PREMIER PAPER COMPANY, Louisville		
	To 10M No. 6 $\frac{3}{4}$ —24 lbs. Premier Regular Envelopes @ 96c	9.60	
	To 10M No. 10—48 lbs. Premier Regular Envelopes @ \$1.70	17.00	
		26.60	
May 31	Voucher Check No. 149	6.60	
	SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville		
	To long distance calls, as follows:		
	Association:		
	Lexington, 3-31; Glasgow, 4-3; Washington, D. C., 4-21; New Castle, 4-18-39		
	(reverse call)	5.10	
	Journal:		
	Bowling Green, 3-29 and 4-25-39	1.50	
		6.60	
May 31	Voucher Check No. 150	447.25	
	THE TIMES-JOURNAL PUBLISHING CO., Bowling Green		
	To 2,300 June issue—72 pages	504.00	
	Less credit by 66 Journals short on May issue	7.50	
	Less 10th payment on note of \$1,400.00	75.00	
		82.50	
		421.50	
	To 200 Technical Exhibit Forms	5.50	
	To 200 Application for Space Forms	7.00	
		12.50	
	To 250 letterheads and 250 envelopes, Dr. H. K. Buttermore, Councilor, 11th District	3.25	
	To 2,500 letterheads, Secretary	10.00	
		13.25	
		447.25	
May 31	Voucher Check No. 151	14.71	
	THE BRECHER CO., Louisville		
	To 3 No. 620-H 1 E Lamps @ \$4.95 each	14.85	
	To 3 No. 40 W. TO Clear Lamps @ 50c each	1.50	
		16.35	
	Less 10% discount	1.64	
		14.71	
	(McDowell Fund expense)		
May 31	Voucher Check No. 152	8.05	
	MALCOLM OWEN, Louisville		
	To reimbursement for materials used in making display case for knocker and album for McDowell Home (McDowell Fund expense)	8.05	
May 31	Voucher Check No. 153	50.00	
	H. W. PETERS, State Superintendent of Public Instruction, Frankfort		
	To 50 Models of the Ephraim McDowell Home (McDowell Fund expense)	50.00	
May 31	Voucher Check No. 154	25.00	
	GILCHER HOTEL, Danville		
	To dedicatory dinner and waiter service, 5-20-39 (McDowell Fund expense)	25.00	
May 31	Voucher Check No. 155	2.75	
	THE 3RD STREET GARAGE, Louisville		
	To 1 Shatter Proof Glass (McDowell Fund expense)	2.75	
May 31	Voucher Check No. 156	86.50	
	THE STANDARD PRINTING CO., Louisville		
	To 3M Dedicatory Programs (McDowell Fund expense)	86.50	
May 31	Voucher Check No. 157	55.52	
	LOUISVILLE POSTMASTER, Louisville		
	To postage on McDowell letters	48.82	
	To parcel postage on McDowell Models mailed to Custodians (McDowell Fund expense)	7.10	
		55.52	
May 31	Voucher Check No. 158	54.46	
	RAILWAY EXPRESS AGENCY, Louisville		
	To express charges on McDowell Models sent to Custodians (McDowell Fund expense)	54.46	
May 31	Voucher Check No. 159	12.34	
	PREMIER PAPER COMPANY, Louisville		
	To 2M 6x9 20 lbs. Manila Catalog Envelopes @ 2.94	5.88	
	To 1 box (500) 6 $\frac{1}{2}$ x9 $\frac{1}{2}$ 28 lbs. Manila Catalog Envelopes (McDowell Fund expense)	1.91	
		7.79	
	To 5M 1 carton No. 6 $\frac{3}{4}$ sub. 24 lbs. Premier Regular Envelopes	4.55	
		12.34	
May 31	Voucher Check No. 160	9.38	
	ELECTRIC BLUE PRINT AND SUPPLY CO., Louisville		
	To 250 blue prints of floor plan for State Meeting exhibits	9.38	

May 31—Voucher Check No. 161 -----		16.35
BUSH-KREBS CO., Louisville		
To 1 sq. HT Chart—8¾x5½ in. -----	8.51	
To 2 sq. HT's Portraits, 1x1¼ in., @ \$3.42 -----	6.84	
To touching up copies -----	1.00	
	<hr/>	16.35
May 31—Voucher Check No. 162 -----		3.50
BRAKMEIER BROS., Louisville		
To 1 Signature Stamp and Cut—J. Duffy Hancock -----	3.50	
May 31—Voucher Check No. 163 -----		10.00
KENTUCKY ADVOCATE, Danville		
To 200 copies of Kentucky Advocate, 5-20-39 (McDowell Fund expense) -----	10.00	
May 18—Voucher -----		.75
NATIONAL BANK OF CYNTHIANA, Cynthiana		
To charge for postage and insurance on securities mailed to A. W. Davis, M.D., Treasurer -----	.75	
June 20—Voucher Check No. 164 -----		3.77
STATE DEPARTMENT OF HEALTH, Louisville		
To reimbursement for postage -----	3.77	
June 30—Voucher Check No. 165 -----		135.00
A. T. McCORMACK, M.D., Louisville		
To June salary, Secretary -----	135.00	
June 30—Voucher Check No. 166 -----		92.75
L. H. SOUTH, M.D., Louisville		
To June salary, Business Manager -----	90.00	
To reimbursement for postage on programs of Fifth District Meeting at Carrollton, 5-25-39 -----	2.75	
	<hr/>	92.75
June 30—Voucher Check No. 167 -----		90.00
J. F. BLACKERBY, Louisville		
To June services rendered Committee on Public Policy -----	90.00	
June 30—Voucher Check No. 168 -----		75.00
ELVA GRANT, Louisville		
To June salary, Bookkeeper -----	75.00	
June 30—Voucher Check No. 169 -----		50.00
ELIZABETH CONKLING, Louisville		
To June salary, Stenographer for Medico-Legal Committee -----	50.00	
June 30—Voucher Check No. 170 -----		32.73
LOUISE C. MOREL, Louisville		
To traveling expenses, Supervisor, Medical Research Project, as follows:		
Trip to Lexington, 5-16 and 17-39 -----	7.83	
Trip to Lexington, Richmond, and Berea, 6-6-10-39, inclusive -----	24.90	
	<hr/>	32.73
June 30—Voucher Check No. 171 -----		5,679.55
A. T. McCORMACK, M.D., Louisville		
To reimbursement for rent on building located at 620 S. Third Street, Louisville--	5,679.55	
June 30—Voucher Check No. 172 -----		2.66
RAILWAY EXPRESS AGENCY, Louisville		
To express for Journal, as follows:		
From Bowling Green, 5-8, 15, and 25-39 -----	1.59	
To express to Bowling Green, 5-16-39 -----	1.07	
	<hr/>	2.66
June 30—Voucher Check No. 173 -----		6.00
MEFFERT EQUIPMENT CO., Louisville		
To 1M No. 4 L-4 Cards Punched Special -----	6.00	
June 30—Voucher Check No. 174 -----		137.86
LOUISVILLE POSTMASTER, Louisville		
To postage for May, McDowell Fund (McDowell Fund expense) -----	30.45	
To postage for May, Association -----	99.10	
To postage, June 1-14, inclusive, Association -----	8.31	107.41
	<hr/>	137.86
June 30—Voucher Check No. 175 -----		10.83
BUSH-KREBS CO., Louisville		
To 2 HT's Portraits—Drs. E. L. Palmore and E. L. Henderson -----	6.83	
To 1 Sq. HT Medical Illustration -----	4.00	
	<hr/>	10.83
June 30—Voucher Check No. 176 -----		7.70
AMERICAN SURETY COMPANY OF NEW YORK, Louisville		
To premium on Policy No. 433265K for Dr. A. W. Davis, Treasurer, 5-1-39—5-1-40 -----	12.50	
Credit by premium on Policy No. 129554D for Dr. Marshall McDowell, Treasurer, cancelled from 5-27-10-15-39 -----	4.80	
	<hr/>	7.70
June 30—Voucher Check No. 177 -----		1.40
MAYME SULLIVAN, Louisville		
To reimbursement for the following:		
Telegram from Covington, 2-27-39 -----	.35	
Messenger service to Postoffice, 3-3-39 -----	.20	.55
Express on McDowell Model which was reforwarded, 6-3-39 (McDowell Fund expense) -----	.85	
	<hr/>	1.40

June 30—	Voucher Check No. 179 -----	429.00
	THE TIMES-JOURNAL PUBLISHING CO., Bowling Green	
	To 2,300 July issue—72 pages -----	504.00
	Less 11th payment on note of \$1,400.00 -----	75.00
		429.00
June 30—	Voucher Check No. 178 -----	28.70
	SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville	
	To long distance calls, as follows:	
	Association:	
	Bowling Green, 4-26 (reverse call), and 5-13-39 -----	1.70
	Lexington, 5-13-39 (reverse call) -----	1.55
	Cynthiana, 5-17-39 -----	.85
		4.10
	Journal:	
	Bowling Green, 5-22-39 -----	.85
	McDowell Fund:	
	Hot Springs, Va., 5-12-39 -----	1.10
	Lexington, 5-12-39 -----	1.55
	Philadelphia, Pa., 5-12-39 -----	2.35
	Lexington, 5-16-39 -----	1.80
	Danville, 5-16-39 -----	1.60
	Lexington, 5-16-39 -----	1.75
	St. Louis, Mo., 5-16-39 -----	3.65
	Lexington, 5-16-39 -----	1.05
	St. Louis, Mo., 5-17-39 -----	2.45
	Danville, 5-17-39 -----	1.55
	Lexington, 5-17-39 -----	2.55
	Philadelphia, Pa., 5-19-39 -----	2.35
	(McDowell Fund expense) -----	23.75
		28.70
June 30—	Voucher Check No. 180 -----	150.00
	CURTIS & CURTIS, Attorneys, Louisville	
	To legal services rendered 1-1-6-30-39, inclusive -----	150.00
June 30—	Voucher Check No. 181 -----	13.98
	WOMAN'S AUXILIARY, Kentucky State Medical Association, Louisville	
	To 25% commission on advertisement amounting to \$75.60 -----	18.90
	Less credit by 1M Journal Envelopes, 10-12-38 -----	4.92
		13.98
June 30—	Voucher Check No. 180A -----	25.00
	MRS. A. V. BRITT, Jacksonville, Florida	
	To shaving mirror which originally belonged to Dr. Ephraim McDowell (McDowell Fund expense) -----	25.00
June 30—	Voucher Check No. 181A -----	3,500.00
	NASH and ROSA RAUM, Danville	
	To payment in full for property situated in Danville, Boyle County, Kentucky, beginning at a point in the curb at the outer or eastern edge of the sidewalk on the West side of Second Street, which point is in line with a straight line extended eastward from the northeast corner of the Dr. Ephraim McDowell House, thence northward with the curb line along the West side of said Second Street a distance of twenty-six (26) feet to the property of Rosa Raum, thence westward with the line of the Rosa Raum property a distance of seventy-nine feet, ten inches (79 ft. 10 in.), more or less, to the property of Hugh Moore, thence southward with the line of said Moore twenty-six (26) feet to the Ephraim McDowell House property (now owned by Commonwealth of Kentucky), thence eastward with the line of the Ephraim McDowell House property (now owned by Commonwealth of Kentucky), seventy-nine feet ten inches (79 ft. 10 in.), more or less, to the point of beginning, and being the same property conveyed to said Nash Raum, of the first part, by James H. Wilson by deed dated July 8, 1907, recorded in Deed Book No. 34, page 219, Boyle County Clerk's Office, less a small strip conveyed to R. A. Lipps, etc., by deed dated April 3, 1920, recorded in Deed Book 48, page 288, said Clerk's Office, and being the same property conveyed to the Kentucky State Medical Association by Nash Raum and Rosa Raum, his wife, by deed dated June 14, 1939 (McDowell Fund expense) -----	3,500.00
July 31—	Voucher Check No. 182 -----	135.00
	A. T. McCORMACK, M.D., Louisville	
	To July salary, Secretary -----	135.00
July 31—	Voucher Check No. 183 -----	90.00
	L. H. SOUTH, M.D., Louisville	
	To July salary, Business Manager -----	90.00
July 31—	Voucher Check No. 184 -----	90.00
	J. F. BLACKERBY, Louisville	
	To July services rendered Committee on Public Policy -----	90.00
July 31—	Voucher Check No. 185 -----	75.00
	ELVA GRANT, Louisville	
	To July salary, Bookkeeper -----	75.00
July 31—	Voucher Check No. 186 -----	50.00
	ELIZABETH CONKLING, Louisville	
	To July salary, Stenographer for Medico-Legal Committee -----	50.00
July 31—	Voucher Check No. 187 -----	525.00
	THE TIMES-JOURNAL PUBLISHING CO., Bowling Green	
	To account of August issue -----	600.00
	Less 12th payment on note of \$1,400.00 -----	75.00
		525.00
Aug. 31—	Voucher Check No. 188 -----	135.00
	A. T. McCORMACK, M.D., Louisville	
	To August salary, Secretary -----	135.00
Aug. 31—	Voucher Check No. 189 -----	90.00
	L. H. SOUTH, M.D., Louisville	
	To August salary, Business Manager -----	90.00

Aug. 31--Voucher Check No. 190 -----	90.00	
J. F. BLACKERBY, Louisville		
To August services rendered Committee on Public Policy -----	90.00	
Aug. 31--Voucher Check No. 191 -----		75.00
ELVA GRANT, Louisville		
To August salary, Bookkeeper -----	75.00	
Aug. 31--Voucher Check No. 192 -----		50.00
ELIZABETH CONKLING, Louisville		
To August salary, Stenographer for Medico-Legal Committee -----	50.00	
Aug. 31--Voucher Check No. 193 -----		163.40
LOUISE C. MOREL, Louisville		
To traveling expenses, Supervisor, Medical Research Project, as follows:		
Trips to Lexington, Paris, Cynthiana, Winchester, Mt. Sterling, Covington, Mays-		
ville, Danville, Stanford, and Bowling Green, during July and August -----	163.40	
Aug. 31--Voucher Check No. 194 -----		425.00
THE TIMES-JOURNAL PUBLISHING CO., Bowling Green		
To account of September issue -----	500.00	
Less 13th payment on note of \$1,400.00 -----	75.00	
	425.00	
TOTAL -----		\$44,396.53



Side View Administration Building Western State Teachers College

ORIGINAL ARTICLES

FACIAL PARALYSIS; RECENT TREATMENT WITH CASE REPORT*

ARTHUR L. JUERS, M. D.

Louisville

The first authoritative accurate description of facial paralysis was made by Sir Charles Bell in 1822, in his article "Anatomy and Philosophy of Expression." Since that time peripheral facial paralysis has usually been referred to as Bell's Palsy. Specifically, the term Bell's Palsy should be used only in reference to facial paralysis resulting from a refrigeration or toxic neuritis. As early as 1890 keen observers noticed that when facial paralysis was secondary to suppurative ear disease the paralysis frequently cleared up when the suppuration ceased, whether spontaneously or secondary to surgical treatment. This paper will be concerned primarily with facial paralysis in which the lesion is in the temporal bone.

The first recorded attempt to treat facial paralysis surgically was in 1897 by Drobnik, who did a facial-spinal accessory anastomosis. The otologist who has undoubtedly done the most work in the reparative surgery of the facial nerve is Sir Charles Ballance. He reported his first Spinal accessory-facial anastomosis in 1895. As a result of his success many anastomosis techniques were developed. The hypoglossal and glossopharyngeal were later more frequently used. However, even when an anastomosis was successful, two obvious adverse factors always were present. First, the inevitable associated movements. Second, the entire lack of emotional expression. With the hope of overcoming these two difficulties the Otologists Arthur Duval of New York, and Sir Charles Ballance of England, in 1930 began extensive experimental work on monkeys. They produced facial paralysis by various methods in these animals and then treated them by doing anastomoses with adjacent motor cranial nerves in some, and by inserting free nerve grafts in others. It was found that using the free nerve graft to replace the sectioned or damaged portion of the facial nerve resulted in the highest percentage of recoveries from paralysis, and in addition overcame the objections to the anastomosis method, i. e., presence of associated movements and lack of emotional expression. In their early experimental work the grafts were taken from an autoplasmic motor nerve but later the use of a graft from

a sensory nerve was found to be just as satisfactory. The technic of the operation will be described briefly in the case report.

Bunnell has described a method of rerouting the facial nerve by means of which he is able to bridge a gap of 16 to 23 mm. To accomplish this he removes a small portion of the floor of the bony external auditory canal wall thereby shortening the course of the nerve as it emerges from the stylo-mastoid foramen. However, this method is applicable in only a small percentage of cases as the defect is frequently more than 2 cm.

Statistics as to the incidence of facial paralysis secondary to operative trauma are difficult to obtain and would vary considerably, depending largely on the ability of the surgeon. Persky recently reviewed 1,500 mastoidectomies at the University of Pennsyl-



No. 1—Left Facial Paralysis before nerve graft operation

vania graduate school and found that in 20 of these cases facial paralysis was present before operation—an incidence of 1.3 per cent. In 11 other cases facial paralysis followed operative trauma at mastoidectomy.

Facial paralysis that is present before operation will usually clear up after adequate mastoid surgery. However, it is occasionally necessary to uncover the facial nerve in its bony canal to relieve the pressure due to inflammatory edema secondary to adjacent mastoid infection. The indications for this procedure are not clear cut, but it should probably be done whenever there is complete

*Read before the Jefferson County Medical Society.

loss of response to faradic stimulation of the nerve.

In those instances where facial paralysis is the immediate result of injury at mastoid operation it may be advisable to uncover the facial nerve as soon as possible as in some cases merely pressure from a small spicule of bone may produce paralysis. The decompression here is usually followed by immediate complete recovery. However, when the nerve is completely sectioned an end to end suture or graft is indicated. Ballance and Duell claim successful results with grafts even in the presence of active mastoiditis, but other workers have advised delay until the mastoiditis has cleared up.

Peripheral facial paralysis not associated with middle ear or mastoid disease is usually of the so-called "refrigerator type." The etiology is not definitely known. The pathology in these cases is an edema of the nerve. As it is surrounded by a rigid bony canal the swelling produces sufficient pressure to interfere with the function of the nerve. It is estimated that 80 per cent of these recover spontaneously. The other 20 per cent recover either incompletely or not at all. It is in this last group of cases that Ballance and Duell felt that a decompression of the facial nerve in the mastoid area would enhance the possibility of complete recovery in most of the cases which would otherwise have a variable amount of residual paralysis. Tickle states that any case of Bell's Palsy that has a complete loss of response to faradic stimulation should have an immediate decompression of the nerve. This may appear to be a radical point of view, but if one considers the psychological effect of a permanent facial paralysis on an individual, the minimal surgical risk attendant on this operation is hardly to be considered. The risk is certainly less than that of any of the more common plastic procedures carried out for other disfigurements about the face, particularly the nose. It is generally agreed that this type of Bell's Palsy reaches its maximum recovery in 6 months to one year. Ballance and Duell reported a few cases of several years duration in which decompression brought about definite partial recovery.

Removal of a parotid tumor necessarily results frequently in excision of one or more branches of the facial nerve. Bunnell and Cardwell have reported successful use of nerve grafts to replace the lost portions. The latter author also cites instances of placing nerve grafts directly into paralyzed muscles with success. Bunnell claims satisfactory re-

sults in the use of nerve grafts in injuries about the hands.

When facial paralysis, secondary to trauma, has been present for several years, the corresponding muscles usually are completely atrophic and a nerve graft operation at this time is useless. Lack of response of muscles to direct stimulation with the galvanic current, indicates muscle atrophy beyond the hope of restoration to function by use of a nerve graft. In these cases the facial distortion may be overcome by fascial slings described by Gillies and Blair, or by transplanting portions of the temporal muscle into the orbicularis oculi and oris according to the method of Sheehan. It is believed that the contact of viable innervated muscle with the



No. 2.—One year after insertion of nerve graft. is able to close the left eye and pull facial muscles to the left.

atrophic paralyzed muscles results in reanimation of the paralyzed muscles. While the immediate results from this muscle transplantation are good, the end-results after a few years appear to be somewhat disappointing. Halle has recently advocated a combination face-lifting operation and muscle transplantation.

A small percentage of cases in which a nerve graft operation is done has a facial tie after recovery. This is probably due to the following factor in the process of regeneration. As the axones grow out into the graft there is frequently a branching of the individual axones of which one branch may fol-

low a nerve fiber to the orbicularis oculi and another may grow down into the fiber to the orbicularis oris. Consequently a reflex or voluntary effort to blink the eye causes an associated contraction of the muscles about the mouth. Unfortunately no amount of reeducation will overcome this situation.

CASE REPORT

This patient sustained a traumatic facial paralysis during a simple mastoidectomy. The operator in this instance apparently used a large curette in opening the retro-facial cells, and consequently tore the facial nerve in this region. At examination several weeks later there was a complete left facial paralysis. There was no response to faradic stimulation over the nerve, but there was an exaggerated response of the paralyzed muscles to galvanic stimulation. This indicated a complete interruption of the corresponding facial nerve. The mastoid cavity was reopened and the facial nerve was exposed at the stylo-mastoid foramen and followed up to the middle ear. At this point was found a neuroma which indicated the upper end of the injured portion of the nerve. The neuroma and 3 cm. of atrophic nerve below this point were excised. A piece of anterior femoral cutaneous nerve was obtained and two strands of it were placed in the gap in the facial nerve. A few fine silk sutures were placed at each end. Complete hemostasis was obtained before insertion of the graft as a small amount of blood between the graft and the nerve ends would impair the growth of neurones across the points of anastomosis. The first indication of return of function was observed about six months after the operation. At this time the patient began to notice an occasional twitch at the angle of the mouth. There was gradual improvement thereafter, and several months later he had almost a complete recovery. In all of these cases there is a little residual weakness of the upper facial muscles. The reason for this is not known.

SUMMARY

1. The surgical procedure of choice in repairing properly selected cases of facial paralysis secondary to trauma in the mastoid area, is the replacement of the injured portion of the facial nerve by a free nerve graft from a cutaneous nerve of the lower extremity.

2. Cases of Bell's Palsy in which there is complete loss of response to Faradic stimulation, should be treated surgically by de-

compression of the facial nerve through a mastoid approach.

3. In cases of peripheral facial paralysis in which the muscles are completely atrophic and no longer respond to direct stimulation with Galvanic current, the deformity can be partially overcome by fascial or muscle transplants.

DISCUSSION

R. Glen Spurling: Dr. Juers has presented ably the summary of modern methods of treatment of facial paralysis. While permanent paralysis of the facial nerve is a relatively infrequent lesion, yet it is an important one because so many of the patients are totally disabled from it. Not only is the deformity of the face a source of untold embarrassment to the sufferer, but the disability resulting from the loss of secretory activity of the salivary and lacrimal glands is quite important.

In order to understand the rationale of any nerve repair one must consider the normal physiology of regeneration. You will recall that the cell bodies of the facial nerve lie in the pons and that their processes (axones) run lateralward from the brain stem to the exit at the facial canal in the temporal bone. After leaving the bony part of the skull at the stylomastoid foramen, the motor part of the nerve divides into two main branches and innervates the muscles of the face.

When the axones composing the facial nerve are cut or destroyed from pressure there is complete degeneration distal to the point of injury. The cell bodies in the pons are undamaged. Therefore, new axones are grown and if, in the process of growth, they can find their former pathways, regeneration of the activity of the nerve returns. When the facial nerve is injured in its bony canal there is usually, in addition to the severed nerve, a dense scar formed at the point of injury. In many cases this scar prevents the newly formed axones passing outward to their proper end-organs and, as a consequence, they become curled up at the central end of the torn nerve forming the so-called traumatic neuroma. The problem, therefore, in any repair is to provide a free pathway and to bridge across the gap in such a manner that these new axones can grow outward to terminate in the motor end-plates of the facial nerve. As Dr. Juers indicated, the best results are obtained when a direct end-to-end anastomosis of the cut nerve can be made. In many cases, however, this is impossible and certainly the next best procedure is to transplant into the gap a segment of nerve tissue.

This operation upon the facial nerve is distinctly an otological problem. It requires not only a thorough knowledge of anatomy of the

temporal bone and the mastoid, but, also, great skill on the part of the surgeon in handling the nerve tissue.

The results in this type of treatment are far better than those that followed anastomosis of the distal ends of the cut facial nerve with either the spinal accessory nerve or the hypoglossal nerve. Regeneration with these or anastomotic methods is reasonably assured, but the functional activity of the face after regeneration is always imperfect. Emotional change of expression is practically nil on the anastomotic side. However, involuntary tone to the muscle does return and in many cases the disability about the eye is alleviated.

Arthur L. Juers, (in closing): I appreciate Dr. Spurling's addition to my paper very much. As to the reason why some of these cases of long-standing Bell's palsy improve after decompression as they do I have not been able to find out. Apparently they do get some recovery after the removal of the bony canal and splitting the nerve sheath, whether by relieving tension on the scar tissue or not I am not able to say.

ERYTHROPOIESIS*

HAROLD GORDON, M. S., M. D.

Louisville

It is stated that certain tribes are unaware of the secret of paternity. Among such tribes a father may play with his children, but they are trained, disciplined and advised by a maternal uncle. A close analogy may be drawn between the biologic ignorance of the savage and the unawareness of physicians regarding the factors responsible for the condition called anemia. For anemia, like the primitive infant, was conceived in innocence, born in ignorance and reared on dogmatic empiricism. Today the very name anemia stands as an indictment of the ignorance of its christening fathers. Small wonder that the infant has become a problem child, abused by the laity and misunderstood by the medical profession.

A working knowledge of the mechanism of erythropoiesis is essential for a rational classification of anemia and the efficient treatment of its various clinical types. It has become traditional to discuss erythropoiesis in terms of the so-called monophyletic or polyphyletic theories. These have in turn been streamlined by unitarian, dualistic or trinitarian doctrinarians. Ac-

knowledgeed experts may be found as proponents of each of these theories. They are more of academic than of practical interest and will not be discussed. The importance of knowing the developmental stages through which the erythrocyte passed before it reached maturity is indicated in Table I. In this table are listed different stages of erythropoietic maturation, the physiologic stimuli believed to be responsible for normal erythrocyte development and the abnormalities of development resulting when one or more of the physiologic determinators are absent or insufficient. The reticulo-endothelial "mother" cell of the erythrocyte is not a definitive cell and morphologically it cannot be identified with certainty. Under ordinary conditions of health, erythropoietic marrow contains only a few cells of this type. We do not know what causes the endothelial cell to differentiate along definite lines. Carrel has shown that a "trephine" is necessary for cell multiplication. Fischer suggested that "desmones" regulate normal differentiation. Hammet and Reimann found sulphhydryl a stimulant for cell increase. These are at present theoretical considerations. The important practical point is that the reticulo-endothelial cell is a "reservoir cell, capable of rapid division and differentiation when the demand for regeneration is urgent. When the supply of reservoir cells is exhausted, primary (essential) aplastic anemia supervenes.

Differentiation of megaloblasts to macronormoblasts and intermediate normoblasts is accomplished as the result of a stimulus supplied by the interaction of an intrinsic (gastric) and an extrinsic (dietetic) factor. The experiments of Castle and his associates in establishing this relationship, coming almost exactly three hundred years after Harvey's work on the circulation, constitute a fitting commemoration of the Englishman's discovery. The hemopoietic principle of Castle acts upon the megaloblasts, causing them to mature and undergo stromal changes in preparation for hemoglobinization. Goldhamer, Isaacs and Sturgis, and Wilkinson and Klein have shown that the hemopoietic principle is stored in the liver. Richter, Ivy and Kim proved that the liver of a treated pernicious anemia patient can store the anti-anemia factor of Castle. The practical application of these discoveries is too well recognized to require emphasis. It is important to keep in mind the fact that, ordinarily, division and maturation of the macronormoblasts ensures the maintenance of an adequate supply

*Read before Jefferson County Medical Society.
Initial Lecture in a Refresher Course in Hematology; From the Department of Pathology, School of Medicine, University of Louisville.













Normal Development	Physiologic Stimulus	Abnormal development when the physiologic stimulus is absent or insufficient
 Reticulo-endothelial cell	? "Trophone". "Deemone". Sulphydryl compound	"Primary" aplastic anemia
 Megakaryoblast  Macro-normoblast	(Intrinsic and extrinsic principles of Castle.)	Hemoglobinized megakaryoblasts and macro-normoblasts. Imperfect stroma. Macrocytic erythrocytes, usually hyperchromic, occasionally normochromic.  
 Intermediate Normoblast	Iron (Copper, Calcium, bile pigments and chlorophyll act as adjuncts to iron)	Hypochromic erythrocytes, usually microcytic, sometimes normocytic. Many polikilocytes.   
 Micro-normoblast	Vitamin C	Hypochromic or normochromic, normocytic or microcytic.
 Reticulocyte	Thyroxin	Variable
 Erythrocyte	Anoxemia for delivery	Polycythemia rubra vera or erythrocytosis if physiologic stimulus is prolonged or increased

Table I. Schematic representation of erythropoiesis. (Modified from Britton & Whitby, Disorders of the Blood, P. Blakiston Son & Co., Philadelphia, Pa. Permission of the publishers.)

of erythrocytes. Depletion of macronormoblasts is accompanied by hyperplasia of megakaryoblasts and endothelial reservoir cells. When the supply of these is depleted symptomatic (secondary) aplastic anemia supervenes. Lack of the antianemic factor of Castle produces abnormal development of the megakaryoblasts and macronormoblasts (maturation arrest) accompanied by a diminution of mature erythrocytes and their reticulocyte precursors (Table I).

Iron is needed at the micronormoblast and reticulocyte level of differentiation. Lack of iron results in the formation of hypochromic cells which are usually smaller than normal. It has been shown that iron absorption or utilization is aided when the iron is accompanied by small amounts of copper. Calcium, bile pigments and chlorophyll also aid iron metabolism. The mechanism through which these substances operate is not clear, but the clinical implications are often important. Vitamin C is the only vitamin and thyroxine the only hormone believed to be necessary for normal erythropoiesis. The level at which these operate is uncertain. Vitamin C probably operates at the same level as iron and deficiency of this substance is accompanied by inconstant changes in red cell morphology.

Erythropoiesis includes not only the developmental phases indicated above, but also delivery of the red blood cells into the peripheral circulation. The stimulus for the latter is believed to be a local anoxemia which occurs when the sinusoids of the marrow are collapsed. The collapse of the vessels is followed by dilatation, causing the newly matured erythrocytes to be swept into the peripheral circulation. This mechanism is ordinarily self-regulating. Prolonged anoxemia or decreased oxygen tension is accompanied by polycythemia rubra or erythrocytosis depending upon whether the anoxemia occurs as the result of sclerosis of the marrow vessels or congenital heart disease, pulmonary fibrosis, high altitudes or methemoglobinemia.

SUMMARY

In this brief review of erythropoiesis the morphological stages of normal erythrocyte maturation are correlated with the responsible physiologic stimuli. The abnormal phases of development, due to insufficiency or absence of the physiologic stimuli are also indicated. An understanding of erythropoiesis provides the only satisfactory basis upon which the anemias may be classified and establishes also a rational approach for their therapy.

STAPHYLOCOCCUS FOOD POISONING, REPORT OF AN OUTBREAK

FRED W. CAUDILL, M. D.

Louisville

and

EDWARD C. HUMPHREY, M. D.

Louisville

The term "ptomaine poisoning" is so vague and inexact that its use is being abandoned. We know that, under certain conditions, the eating of food contaminated with certain bacteria results in either (1) infection of persons consuming food, or (2) poisoning of such individuals by a toxin formed by the bacteria in the food before it is eaten. To the "food infections" belong disorders due to ingestion of bacteria of the *Salmonella* group and dysentery bacilli. Until recently the teaching has been that "food toxemia" was due only to toxin formed by *B. botulinus*.

However, in 1914, Barber attributed the toxic symptoms of milk poisoning to a type staphylococcus albus. This seems not to have attracted very much attention. In 1930, Jordan, and also Dack and his associates, proved that outbreaks of food poisoning were due to contamination of certain foods by staphylococcus aureus. It was shown by experiments on men and on monkeys that the offending agent was an exotoxin elaborated in the food by the staphylococci.

Since then many outbreaks have been reported and studied. It has been shown that a toxin can be formed by the staphylococcus aureus or albus, and that it is distinct from the several other toxins which staphylococci produce. In contradistinction to these, as well as to the toxin of *B. botulinus*, this particular toxin resists heat to a considerable degree. Hunter states that the exotoxin is destroyed at 176 degrees F. in thirty minutes. It is not completely destroyed at boiling (212 degrees F.) in ten minutes, and is only slightly weakened by heating at 149 degrees F. for ten minutes.

Humans differ in the severity of reaction shown to this toxin, but the symptoms of poisoning, speaking generally, are those of acute gastro-enteritis, vomiting, diarrhoea and prostration. No deaths have been reported but a fatal outcome is easily conceivable. Presumably the degree of reaction is dependent on the quantity of toxin ingested as well as the varying individual susceptibility above mentioned.

The foods most often contaminated are custards, cream filled cakes or tarts, custard pies and Hollandaise sauce. Milk, meats and potato salad have been found responsible for outbreaks. Whatever the food be, it is safe if

eaten immediately after it is prepared or cooked. The danger is when a foodstuff, contaminated with staphylococci, is allowed to stand for several hours at room temperature and then eaten. Refrigeration greatly inhibits the growth of these organisms and the consequent production of the toxin.

As to the diagnosis, this type of food poisoning should always be suspected when persons become ill with symptoms of acute gastro-enteritis within two to five hours after a meal. The onset is seldom later than this and has usually subsided within eight to ten hours after eating the contaminated food. The bacteriological diagnosis is made by culturing the suspected food. If a heavy growth of staphylococci ensues, this is good presumptive evidence. For complete and final proof, the enterotoxin factor of broth cultures must be assayed, and Daek and his co-workers have shown that this is very difficult. They state that parenteral injection of monkeys or kittens is the best method.

The outbreak described in the following account occurred on December 26, 1938, in Kentucky. Thirty-one cases were reported; there may have been others which were not reported. Of the thirty-one cases, all but five had eaten at the same hotel on December 26, and the five had eaten some sauce brought home from the hotel by the assistant manager. The great majority had eaten their evening meal at the hotel and became ill two to five hours later. However, in three cases, the onset followed lunch at this same hotel, occurring two to five hours thereafter. On questioning, it was found that, in every case, one of two foodstuffs had been eaten, namely, either Hollandaise sauce or a cream sauce in which Hollandaise sauce is used. Those not partaking of either of these did not become ill. The most conclusive evidence was the story of the five persons who consumed at the home of the assistant manager, sauce which had been brought from the hotel. Six people sat at the table where the sauce was served. Five partook of the sauce and became ill; the sixth ate none of the sauce and remained well. No other food was brought from the hotel.

Clinically, the cases varied from fairly mild to extremely severe gastro-enteritis. In the severe cases, there was persistent vomiting, cramps, profuse diarrhoea, and prostration of an alarming character. One case had a blood tinged diarrhoea and was prostrated and dehydrated to a point where intravenous saline and glucose were thought necessary. In this case and in the others, the acute enteritis was over within eight hours

and subsequent recovery was rapid and uneventful.

The Hollandaise sauce was made of eggs, butter, lemon juice and consomme. In the cream sauce this Hollandaise was used as a base. Upon culturing a specimen of the Hollandaise an almost pure culture of hemolytic staphylococcus, both aureus and albus was obtained. The cook stated that the sauce had been made about eight o'clock in the morning and then used throughout the day. It was kept at room temperature because refrigeration causes the sauce (which is an emulsion) to "settle out" in layers.

On examination of the hands of the kitchen staff, it was found that many had minor abrasions or grease burns, which could have harbored staphylococci, but this line of investigation was not thought to be promising, as staphylococci are found in so many places that it is practically impossible to determine which particular focus is the source of the infecting organisms.

It is of interest to note that the cream sauce was served hot, illustrating the relative stability of the toxin to heat. It should also be noted that the great majority of persons affected ate the sauce for supper, i. e., after it had stood at room temperature practically all day.

CONCLUSION

It seems to us that the outstanding lesson of this outbreak is that any food of the types mentioned at the beginning of this paper should either be eaten within a couple of hours after cooking, or be kept continuously in a refrigerator until served. It is not possible to refrigerate Hollandaise sauce and it should, therefore, be made in small quantities and served fresh for each meal. A clean kitchen, clean food handlers, sterilized utensils and a minimum of manual handling of foods are always highly desirable. It must be emphasized, however, that, even with all these precautions this type of contamination can still occur, if and when certain types of prepared foods are allowed to stand for several hours without proper refrigeration. This is particularly true when the weather is warm.

Dr. C. C. Threlkel has resigned as health officer of Butler County on account of ill health. Dr. Threlkel has been one of Butler county's oldest and best loved practicing physicians before he became health officer.

Dr. John B. Floyd, Richmond, was elected president of the Kentucky State Elks' Association at the annual convention.

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NEXT MEETING: BOWLING GREEN
SEPTEMBER 11-14, 1939

COUNTY SOCIETY REPORTS

Fifth District: The Fifth District Medical Society of the Kentucky State Medical Association met in the court house at Carrollton, at 4 p. m., May 25, 1939, with F. M. Travis, vice-president, in the Chair and George Purdy, secretary pro tempore.

The Chair appointed Drs. Brown, Grant and Weir to draft appropriate resolutions of respect concerning the death of E. E. Bickers, Eminence, and Webb Suter, Campbellsburg, who were respectively president and member of this society at the time of their death. Drs. Alexander, Henderson and McBee were appointed a committee on nominations.

A. D. Doak reported two cases: (a) "Malta Fever" and (b) "Pneumonia Treated by Sulfapyridine," which were discussed by Drs. Purdy, Elmore, Coblin, Stites and Doak, in closing.

Lee Palmer read a paper on "Sulfapyridine in the Treatment of Pneumonia in Children," which was discussed by Drs. Elmore, Snyder, Stites, Minish, Travis, Alexander, Lukins, and Threlkeld.

At 6:00 o'clock the meeting adjourned for a delightful dinner at the Carrollton Hotel.

Upon reconvening, the Committee on Resolutions reported as follows:

At the spring meeting of the Fifth District, at Carrollton, this 25th day of May, 1939, the following resolutions were passed:

"Resolved, that in the death of Dr. E. E. Bickers, of Eminence, Henry County, this society has been deprived of a most valuable member.

Dr. Bickers was born in Owen County, Ky., in 1872, graduated in the Kentucky School of Medicine in 1898, practiced medicine in Grant, Gallatin, Owen and Henry counties. He was a former president of the Board of Health of Henry County, mavor of Eminence for several terms, trustee of the Odd Fellow's Home at Eminence and medical advisor for that institution, and chairman of the Republican Committee of Henry County. He was a very active practitioner, a genial man and a good neighbor. At the time of his death on March 14th, 1939, he was the president of this society.

Resolved, that this society unanimously concurs in expressing its own loss of a valuable member and leader and extends to Dr. Bicker's widow and two sons, its sincere sympathy in the mutual bereavement.

Resolved, that this society spread a copy of this resolution on its minutes and send a copy to the family.

At the spring meeting of the Fifth District Medical Society of Kentucky at Carrollton, the following resolutions were passed:

Resolved, that the death of Dr. Webb Suter of Campbellsburg, Henry County, has deprived this society of a valuable and energetic member. He was born September 30th, 1879, he grad-

uated from the Hospital College of Medicine, Louisville, Kentucky in 1905. He practiced in Henry, Oldham, Trimble and Owen counties. He was actively engaged in the general practice of medicine until the recent illness, which caused his death, May 23rd, 1939.

Resolved, that this society unanimously concurs in expressing its deep sympathy in the loss of a valuable member of the society and profession of the state to Dr. Suter's widow and family.

Resolved, that this resolution be spread on our minutes and a copy presented to the family.

The reports were unanimously adopted.

By a standing vote the society expressed its regrets for the illness and wish for the speedy recovery of Drs. Allen Donaldson, F. D. Hancock, W. W. Leslie and W. E. Gardner.

Talks were made by Drs. Henderson and Hancock, Louisville, concerning the relation of the American Medical Association and the Wagner Bill. The attitude taken by the Association was unanimously approved by this society. Dr. Snyder announced that Morris Fishbein of Chicago, would come to Frankfort sometime in the early fall to talk on Medical Legislation.

The Chair announced that Dr. Phillip Nodler had been excused from his part on the program. E. B. Baughman's paper was read by Dr. Leonard, subject, "Treatment by Nailing of Fracture of Neck of Femur."

Discussion: Drs. Joplin, Owen, Wood, Snyder, Allen, Ewing, Casper, Grant, Lukins and the essayist.

The nominating committee reported as follows: For president, F. M. Travis; for first vice-president, O. P. Chapman; for second vice-president, A. D. Doak; secretary, Owen Carroll. On motion the report was unanimously adopted.

Adjourned.

GEORGE PURDY, Secretary, Pro Temp.

Boyle: The Boyle County Medical Society was host at another joint meeting of the Sixth and Seventh Councilor Districts in Danville, Tuesday, June 20th. The meeting was held at the Danville Country Club, a mile out the Lexington road from Danville and began at 3:30 p. m. The program was as follows:

Cysts of Pituitary Gland with Case Reports, W. D. Reddish, M. D., Lexington.

Carcinoma of the Skin (lantern slides) by R. E. Downing, M. D., Lexington.

Coronary Disease, by R. C. Blount, M. D., Lexington.

Meckels Diverticulum, Case Reports, by S. P. Hemphill, M. D., Danville.

Nasal Ciliary Action, (movie) by A. L. Bass, M. D., Louisville.

The Doctor and the Public, by C. C. Howard, M. D., Glasgow.

P. C. SANDERS, Secretary.

Muhlenburg: The Muhlenburg County Medical Society met on our regular meeting night, June 13, at 6:30 p. m.

There was a barbecue and burgoo dinner served to forty doctors from this and adjoining counties.

Austin Bell of Hopkinsville, read a paper on Infant Feeding and Lester Dodson of Owensboro, gave a paper on Treatment of Fractures.

This was one of the best meetings we have had in several years.

E. L. GATES, Secretary.

Nelson: The Nelson County Medical Society was host to members of the Fourth Councilor District at Bardstown, Thursday, June 22nd.

The afternoon meeting began at 3 p. m. and was held at the City Hall. The evening meeting was held at the American Legion Armory at 7 p. m. and open to the public.

Dinner was served at the Old Kentucky Home Hotel at 8 p. m. The program was as follows:

Relief of Back Pain and Sciatica, Conservative and Simple Operative Procedures, Charles Wood, M. D., Louisville.

Diarrhea In Children, W. W. Nicholson, M. D., Louisville.

Gastro-Intestinal Symptoms Associated With Allergy, Ben Hollis, M. D., Louisville.

Cancer of the Uterus, W. O. Johnson, M. D., Louisville.

Cancer of the Gastro-Intestinal Tract, Frank Stites, M. D., Louisville.

W. KEITH CRUME, President.

NEWS ITEMS

Dr. Meyer M. Harrison announces the opening of his office for the practice of medicine, 804 Heyburn Building, Louisville. Practice limited to internal medicine.

The Hall of Man and various educational exhibits in the Medicine and Public Health Building are attracting many visitors among the profession. Lederle Laboratories are sponsoring an interesting exhibit in this building on Allergy and Pneumonia, each exhibit being controlled by a committee of eminent specialists on these diseases. These exhibits are scientific in character and present pictorially the best composite opinion of the medical profession.

Physicians visiting the New York World's Fair are entitled to exclusive privileges of the Professional Club in the same building. Admission is obtained by simple identification as a doctor, without charge, and is only available to physicians and their guests. Provision is made here for consultation with exhibit sponsors on technical questions.

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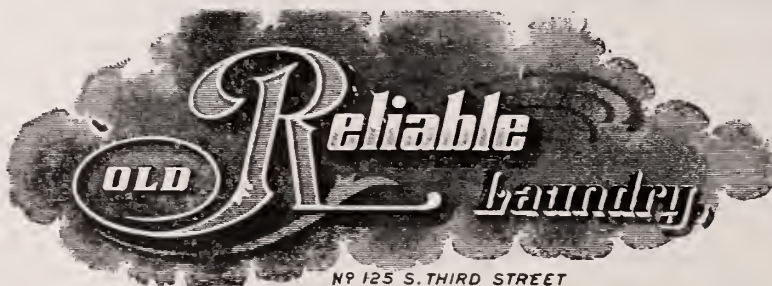
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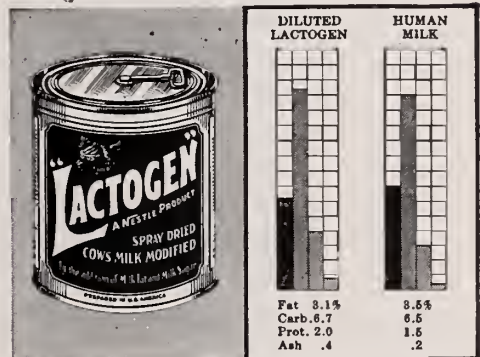
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SEPTEMBER, 1939

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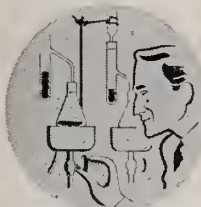
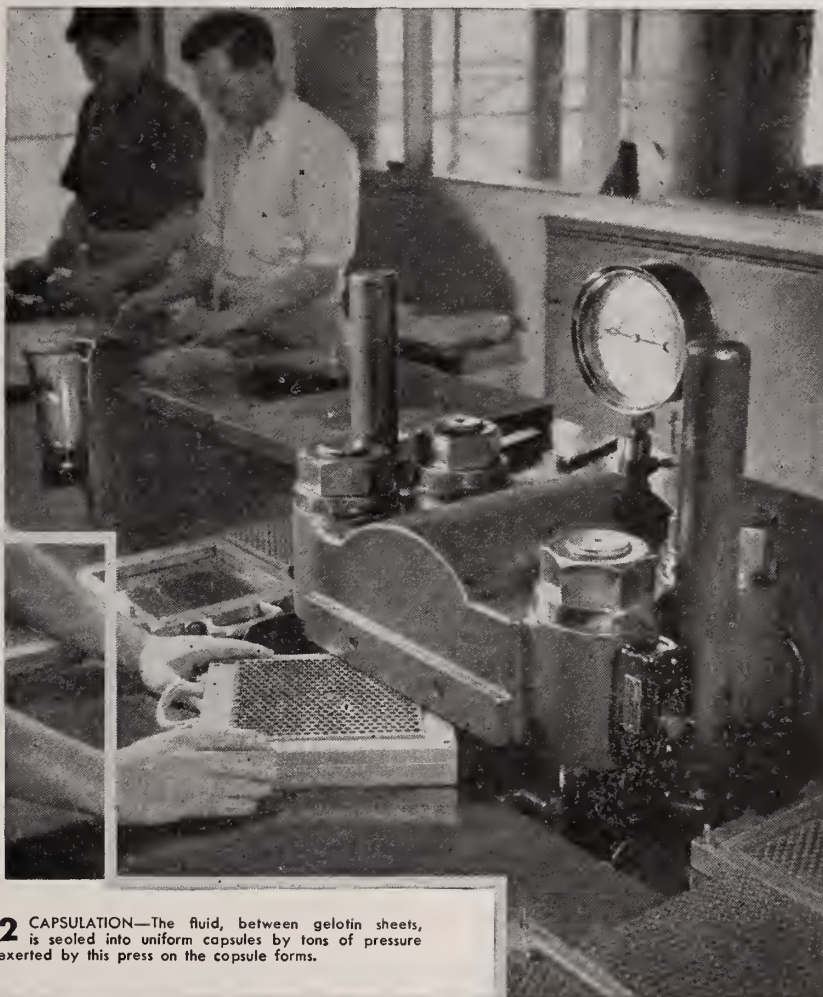
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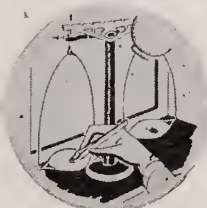


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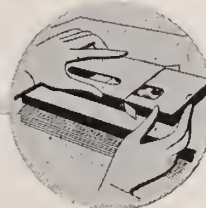
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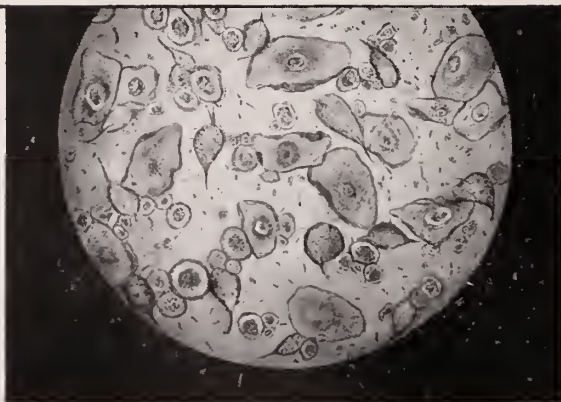
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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Adair	N. A. Meccer	Columbia	September 6
Allen	A. O. Miller	Scottsville	September 27
Anderson	J. B. Lyen	Lawrenceburg	September 4
Ballard	F. H. Russell	Wickliffe	September 12
Barren	Rex Hays	Glasgow	September 20
Bath	H. S. Gilmore	Owingsville	September 11
Bell	E. S. Wilson	Pineville	September 3
Boone	R. E. Ryle	Walton	September 20
Bourbon	Eugene L. D. Blake	Paris	September 21
Boyd	Hubert J. Pritchard	Catlettsburg	September 5
Boyle	P. C. Sanders	Danville	September 19
Bracken-Pendleton	W. A. McKenney	Falmouth	September 28
Breathitt	Philip Bress	Jackson	September 19
Breckenridge	J. E. Kincheloe	Hardinsburg	September 14
Bullitt			
Butler	G. E. Embry	Morgantown	September 6
Caldwell	W. L. Cash	Princeton	September 5
Calloway	Hugh L. Houston	Murray	September 14
Campbell-Kenton	Joseph H. Humpert	Covington	September 7
Carlisle	E. E. Smith	Bardwell	September 5
Carroll	J. M. Ryan	Carrollton	
Carter	Don E. Wilder	Grayson	September 12
Casey	William J. Sweeney	Liberty	September 28
Christian	D. M. Clardy	Hopkinsville	September 19
Clark	R. E. Strode	Winchester	September 15
Clay	J. L. Anderson	Manchester	
Clinton	S. F. Stephenson	Albany	September 16
Crittenden	C. G. Moreland	Marion	September 11
Cumberland	W. F. Owsley	Burkesville	September 6
Daviess	James E. Hix	Owensboro	September 12 & 26
Elliott			
Estill	Virginia Wallace	Irvine	September 13
Fayette	D. E. Scott	Lexington	September 12
Fleming	Roy Orshurn	Flemingsburg	September 13
Floyd	J. G. Archer	Prestonsburg	September 27
Franklin	Grace R. Snyder	Frankfort	September 7
Fulton	J. C. Morrison	Fulton	September 13
Gallatin	J. M. Stallard	Sparta	September 21
Garrard	J. E. Edwards	Lancaster	September 21
Grant	Paul E. Harper	Dry Ridge	September 20
Graves	H. H. Hunt	Mayfield	September 5
Grayson			
Green	S. J. Simmons	Greensburg	September 4
Greenup	R. L. Compton	Greennup	September 8
Hancock	F. M. Griffin	Hawesville	September 4
Hardin	D. E. McClure	Elizabethtown	September 14
Harlan	W. E. Riley	Harlan	September 16
Harrison	W. B. Moore	Cynthiana	September 4
Hart	S. F. Richardson	Munfordville	September 5
Henderson	J. Leland Tanner	Henderson	September 11 & 25
Henry	Owen Carroll	New Castle	September 7
Hickman	Layson B. Swann	Clinton	September 7
Hopkins	David L. Salmon	Madisonville	September 7
Jackson			September 2
Jefferson	W. B. Troutman	Louisville	September 4 & 18
Jessamine	J. A. VanArsdall	Nicholasville	September 21
Johnson	P. B. Hall	Paintsville	September 9
Knox	W. Parker Clifton	Barbourville	September 22
Larue			
Laurel	Oscar D. Brock	London	September 13
Lawrence	L. S. Hayes	Louis	September 18
Lee	W. D. McCollum	Beattyville	September 9
Leslie			
Letcher	J. E. Johnson	Jenkins	September 26
Lewis	C. P. Pennington	Vanceburg	September 18
Lincoln	Lewis J. Jones	Hustonville	September 15
Livingston	C. M. Fischbach	Smithland	
Logan	E. M. Thompson	Russellville	September 6
Lyon	H. H. Woodson	Eddyville	September 5
McCracken	J. V. Pace	Paducah	September 27
McCreary	R. M. Smith	Stearns	September 4
McLean	A. R. Will	Calhoun	September 14
Madison	C. B. Billington	Richmond	September 21
Marion	W. E. Oldham	Lebanon	September 26
Marshall	S. L. Henson	Benton	September 20
Mason	C. W. Christine	Maysville	

COUNTY	SECRETARY	RESIDENCE	DATE
Meade			September 28
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	September 12
Metcalfe	E. S. Dunham	Edmonton	
Monroe			
Montgomery	D. H. Bush	Mount Sterling	September 12
Morgan			
Muhlenberg	E. L. Gates	Greenville	September 12
Nelson	R. H. Greenwell	Bardstown	September 20
Nicholas	T. P. Scott	Carlisle	September 18
Ohio	Oscar Allen	McHenry	September 6
Oldham			September 5
Owen	K. S. McBee	Owenton	September 7
Owsley			September 4
Perry	W. W. Buckhold	Hazard	September 11
Pike	H. K. Bailey	Pikeville	September 18
Powell	I. W. Johnson	Stanton	September 4
Fulaski	M. C. Spradlin	Somerset	September 14
Robertson			
Rockcastle	Lee Chestnut	Mount Vernon	September 1
Rowan	A. W. Adkins	Morehead	September 11
Russell	J. R. Popplewell	Jamestown	September 11
Scott	Carl M. Gambill	Georgetown	September 7
Shelby	A. D. Doak	Shelbyville	September 21
Simpson	N. C. Witt	Franklin	September 12
Spencer			
Taylor	W. B. Atkinson	Campbellsville	September 7
Todd	B. E. Boone, Jr.	Elkton	September 6
Trigg			September 27
Trimble			
Union	W. O. Carson	Bowling Green	September 27
Warren-Edmonson	J. H. Hopper	Willisburg	September 13
Washington	Frank L. Duncan	Monticello	September 20
Wayne	C. M. Smith	Dixon	September 29
Webster	C. A. Moss	Williamsburg	September 7
Whitley	G. M. Center	Campton	September 4
Wolfe	George H. Gregory	Versailles	September 7
Woodford			

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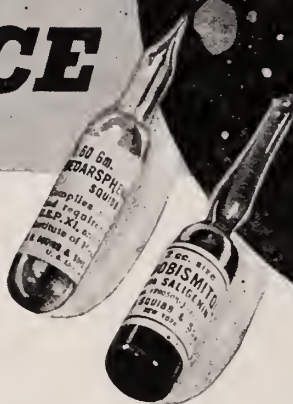
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BIBLIOGRAPHY

GUTTMANN, E.—The Effect of Benzedrine on Depressive States—*J. Ment. Sci.*, 82:618, September, 1936.

MYERSON, A.—Effect of Benzedrine Sulfate on Mood and Fatigue in Normal and in Neurotic Persons—*Arch. Neurol. & Psychiat.*, 36:816, October, 1936.

DAVIDOFF, E.—A Clinical Study of the Effect of Benzedrine Therapy on Self-Absorbed Patients—*Psychiatric Quart.*, 10:652, October, 1936.

WILBUR, D. L.; MACLEAN, A. R. and ALLEN, E. V.—Clinical Observations on the Effect of Benzedrine Sulphate—*Proc. Staff Meet. Mayo Clin.*, 12:97, February 17, 1937.

NATHANSON, M. H.—The Central Action of Beta-aminopropylbenzene (Benzedrine)—*J. A. M. A.*, 108:528, February 13, 1937.

DAVIDOFF, E. and REIFENSTEIN, E. C., JR.—The Stimulating Action of Benzedrine Sulfate—*J. A. M. A.*, 108:1770, May 22, 1937.

GUTTMANN, E. and SARGANT, W.—Observations on Benzedrine—*Brit. Med. J.*, 1:1013, May 15, 1937.

WOOLLEY, L. F.—The Clinical Effects of Benzedrine Sulphate in Mental Patients with Retarded Activity—*Psychiatric Quart.*, 12:66, January, 1938.

ANDERSON, E. W.—Further Observations on Benzedrine—*Brit. Med. J.*, 2:60, July 9, 1938.

BRINTON, D.—Nervous Diseases—Benzedrine Sulfate—*The Practitioner*, 139:385, October, 1937.

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY—The Present Status of Benzedrine Sulfate—*J. A. M. A.*, 109:2064, December 18, 1937.

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY (Announcement of Acceptance)—*J. A. M. A.*, 111:27, July 2, 1938.

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SEPTEMBER, 1939

ORIGINAL ARTICLES

THE RESPONSIBILITY OF THE PHYSICIAN IN LUNACY INQUESTS

J. G. WILSON, M.D.,

Frankfort

Director Division of Hospitals and Mental Hygiene

Since the passage of the Chandler-Wallis Act, on May 28, 1938, there has been a gradual improvement in the internal administration of the hospitals for the mentally ill. The professional staffs have been augmented, nursing has been put upon a better basis, the ratio of attendants to patients substantially increased, full time dental service instituted (except at the Feeble-Minded Institute), systematic instruction of attendants started, occupational therapy completely reorganized so that it includes not only work in the industrial shops but on the wards as well, systematic recreation introduced, the method of holding staff conferences revolutionized, receiving wards returned to their original purpose, the infirmaries changed into real hospital wards with trained nurses in charge, diagnosis and classification placed upon a more scientific basis, trained dietitians employed, and modern methods of treatment, including shock treatment and hydrotherapy, introduced.

When we consider the limited appropriations at our disposal, and the fact that notwithstanding the clear intention of the Chandler-Wallis Act to remove the hospitals from political influence, this influence nevertheless actually persisted for some time, and is not yet entirely gone, we believe that we have made as much progress as could be reasonably expected.

So far this progress has been confined almost exclusively to the internal administration of the hospitals themselves, because it is impossible to extend the mental hygiene program to the communities, as

contemplated by the Chandler-Wallis Act, until more funds are available for social service case workers and the techniques of coordinating all field social service work, both private and governmental, worked out so that they may all function as county units under the joint administrative supervision of the Department of Welfare and State Health Department.

When this is accomplished, we may expect to see the hospitals serve the purpose for which they are intended, to-wit: care and treatment of those who are definitely psychotic, or definitely feeble-minded, leaving the border-line cases, the harmless incipient cases, and the juvenile or senile problem cases uncomplicated by feeble-mindedness or psychosis, to be treated and supervised by out-patient clinics, and the field worker attached thereto.

But this is not yet accomplished, and from the present outlook it will be some time before it can be. In the meantime, our hospitals contain large numbers of persons which local communities unload upon them solely because these communities have found by past experience that this is the easiest way out of embarrassing family situations. Not only are all our institutions cluttered up with persons who never should have been committed to them, but they also contain large numbers of recovered or improved patients whom we desire to discharge or parole to make room for new patients who are in dire need of treatment; but we cannot do so because the communities, from which they originally came, refuse to receive them.

When the out-patient clinics and field service, before mentioned, finally begin to function, this situation should automatically cease to exist, but, in the meantime, it can be substantially improved by a change of attitude on the part of the physicians called by the courts to serve on lunacy inquests.

Although the Chandler-Wallis Act made it possible to effect temporary commitments in certain cases without jury trial, it did not repeal the law which requires jury trial for indefinite commitments, and as a result it is still quite possible for a combination of weak courts, obliging doctors and unethical lawyers to send a sane man to the state hospital. In this vicious chain of three links, the doctors hold the key position, because the juries, as a rule (though not always), are guided by their expressed opinion, and the judge cannot afford to go back on the jury.

Members of the medical profession should take their responsibilities seriously when called to testify in lunacy inquests. The law clearly states that the two examining physicians, appointed by the court, shall be special students of mental disease (Section 216aa78). Therefore, it would appear to be unethical for a physician, who does not consider himself especially qualified in the diagnosis of these diseases, to serve as an examiner in lunacy. But if he must so serve, he should at least conform to these other provisions of the law which require him to make a personal examination of the patient and submit a history of the case which will justify his conclusions that such patient is in reality of unsound mind.

We have examined a great many commitment papers, and, with the exception of those admitted through the Psychopathic Department of Louisville City Hospital, we have seldom found one that contained a helpful or enlightening statement by the examining physician.

In each one of our institutions we have many patients where the only legal requirement met is the order of the court committing such patient. This order is, of course, final so far as the superintendent is concerned, and he must perforce receive the patient, because he cannot refuse on the ground that the examining physicians have not done their duty.

Our hospitals contain large numbers of patients, who, judged solely from the standpoint of diagnosis, should never have been committed. They run the gamut of almost every social and pathological condition ranging from wayward girls who try to conceal an illegitimate early pregnancy from their parents under the guise of a feigned insanity, to acute

drunks whose families have enough influence with the doctors to wangle a certificate of unsound mind and thus prevent the alternative of thirty days in jail for their wayward son or daughter. They include the unusually troublesome (though not psychotic), sick and old from every walk of life. There is also a fair sprinkling of those sent solely to obtain purely medical and surgical treatment, and there are some for which the real motive for commitment has been so effectively concealed that we cannot even guess at it.

The following case histories are only a few of the many which serve to confirm our statement that our hospitals have an undue number of patients unloaded upon them by local communities solely because these communities have found by past experience that this is the easiest way out of embarrassing family situations:

Case I: From the records of Western State Hospital

Male, 82 years old, recently committed and certified on Form No. 215, Inquest in Lunacy, as follows:

"We have examined the said defendant within the three days just prior to the date of this certificate; in our judgment he is an insane person and requires supervision and control for his own welfare, which can best be provided by commitment to Western State Hospital. The foregoing opinion is based upon the following facts and circumstances: history of the case and examination this day made."

Signed _____ M. D.

Signed _____ M. D.

There was no history of the case submitted, and not one particle of evidence recorded in the commitment papers to justify the above conclusion which might or might not have been correct. But, as a matter of fact, it was not correct, because a painstaking neuropsychiatric examination by our own medical staff revealed nothing, either in the past history of this man nor his present mental condition, to warrant the statements made by the two examining physicians. However, we did find that he was suffering from a large inoperable malignant tumor of the upper jaw, and that his physical condition was such that he was no longer able to earn a living for himself and wife.

Case II: From the records of Western State Hospital

A young woman admitted February 20, 1939, discharged March 13, 1939, was certified by the examining physicians as follows:

" . . . an insane person requiring supervision and control for her own welfare, which can best be provided by commitment to Western State Hospital. The foregoing opinion is based upon the following facts and circumstances: Grand Mal, dementia following.

Signed ----- M. D.
Signed ----- M. D.

This was a typical case of Lyttles Disease with all the neurological findings necessary to justify this diagnosis. The occasional convulsions were only a part of the total clinical picture. Her sensorium was intact. She had no dementia nor any symptoms of mental disease, whatsoever. One would think that the paralytic club foot, positive Babinski, and scissors gait which she presented would have prompted the court physicians to have given her a more careful examination. In fact, the suspicion is aroused that possibly they did not personally examine her at all. Perhaps they just looked at her and listened casually to her family's statements that she had had fits, and jumped to a conclusion which they thought would be the most satisfactory to all concerned.

Case III: From the records of the Feeble-Minded Institute

A twenty-three year old young man, committed in 1933 by the court on the evidence of two physicians (jury trial waived) who certified that he was "mentally deficient (mind of a child) Kleptomaniac."

In the first careful psychological examination made of this case, five years after admission, we found that this young man was not, and never had been, feeble-minded. His mental age by Stanford-Binet test is fifteen years and nine months, and his intelligence quotient 105.

The history reveals that he, with two other boys, had stolen a car. The other two boys received prison sentences, but his family evidently had sufficient influence to secure a commitment to the Feeble-Minded Institute and thus avoid the stigma of a prison sentence. The psychological examination shows clearly that

the court physicians' testimony that he had the "mind of a child" was far from the truth, and the only evidence that he was a "Kleptomaniac" was that he had helped two other boys steal a car. As this was the first and only record of stealing against him, the diagnosis of "Kleptomaniac" is, to say the least, very far fetched.

But, granting him to have been a social problem, and in need of supervision and training, we are faced with the fact of an unfortunate commitment, for it cannot be emphasized too strongly that a feeble-minded institution is not the place for those who are merely socially maladjusted.

Case IV: From the records of the Feeble-Minded Institute

A boy eight years and seven months old, recently committed by the court on the findings of a jury and two examining physicians that he was feeble-minded, was found by us to have a mental age of eight years and six months, and an intelligence quotient of 100.

The history accompanying the commitment papers indicated that he had been a social problem, but his teachers at the Feeble-Minded Institute have not found this to be the case. Observation of the subject over a period of seven months has convinced them that he is not feeble-minded, either from the standpoint of mental deficiency or social incompetency. It may be that he gave his guardian some disciplinary trouble, but his age and amenability to training indicate he has the possibilities of developing into an average citizen, if given the opportunity to do so. That opportunity is definitely not provided to the best advantage by an institution for the feeble-minded. Such development is contingent, to a great degree, upon the environmental stimuli present, and the chance to compete in normal social conditions. Such conditions do not exist in any feeble-minded institution.

Case V: From the records of Eastern State Hospital

A fifty-three year old woman, committed in 1938, on jury trial supported by the evidence of two examining physicians that she was of unsound mind, such mental and nervous disturbance dating from a severe illness of one year's duration. No details concerning the nature of this illness were given, except that she suffered

from marked depression and crying spells.

Examination on admission revealed that she had marked enlargement of the supraclavicular lymph nodes, evidence of pulmonary congestion on the left, with partial obstruction of the left bronchus. There was a mass in the upper left quadrant, suggesting an enlarged spleen, an enlarged uterus (possibly fibroid). There was marked enlargement of the upper one-third of the right femur, and the entire right thigh was twice as large as the left, and was tender and brawny. X-ray revealed a neoplasm of the upper third of the femur, which appeared to be a sarcoma.

The diagnosis was sarcoma of the right femur with metastasis to the spleen and left lung.

Her condition grew progressively worse, she became more restless and excited, and near the last talked in a rambling and incoherent manner. She died three and one-half months after her admission.

Her mental symptoms were only those which one would naturally expect in a pain wracked woman suffering from extensive malignant organic disease. There was no more reason for committing her to a hospital for the insane than there would be for committing a patient with organic heart disease or pneumonia simply because he was delirious.

This opinion is substantiated by the statement of her brother, with whom she lived, that she never talked irrationally, and that he did not feel that there was anything wrong with her mind.

Case VI: From the records of Eastern State Hospital

A married woman recently committed for a 35-day period of observation and treatment, on the statement of two examining physicians that her mental condition was so abnormal that her safety and that of the public required this procedure.

This woman came to the Hospital in an ambulance, suffering from severe anemia due to post partum hemorrhages. No evidence of psychosis was found; but she was in imminent need of blood transfusion. She stated that there had been family and economic troubles which necessitated her living with her father, and that, as he was no longer able to pay the

doctors' bills, she was advised by the doctors and her father to come to Eastern State Hospital, one of the doctors having warned her to act as though she were out of her mind, in order to facilitate admission. She firmly denies having had any periods of hallucinations or delusions, or of saying or doing anything that would indicate that she was psychotic at all. At the institution she was placed in the infirmary, received blood transfusions, and was treated as a purely medical case.

In the foregoing case histories, we have purposely omitted the names of the physicians who signed the commitment papers, because we have no personal grievances against them, and do not believe that they are any more to blame than the rank and file of general practitioners who serve on lunacy inquests throughout the United States. Moreover, we fully realize that all these physicians are placed in a difficult position. Often they are the family physicians of the persons who are bent on solving the behavior problem of their near relatives in the easiest way, and it is unreasonable to expect them to render a decision that entirely overlooks this aspect of the question. If there is a reasonable doubt in their minds, they will naturally interpret that doubt in favor of their friends and clients. However, they should not forget that before everything else they should be proud of their professional standing and do all they can to help make the State Hospital program successful. Undoubtedly more institutions are needed, and, above all, mental hygiene clinics for out-patient treatment. If these facilities existed, we would not feel the need of writing this article. But it will necessarily be some time before they do. Therefore, we reiterate our belief that, notwithstanding dearth of adequate facilities, the situation may be materially relieved by exercising extreme care in commitments. Although judges and juries may come in for their share of blame, the major responsibility rests with the medical profession.

In conclusion, it should not be forgotten that occasionally great harm may be done by committing normal or borderline cases to mental institutions, as this sometimes reacts unfavorably on the patient, and precipitates a full-fledged psychosis which would have otherwise been avoided.

CLINICAL DIAGNOSIS IN GENERAL PRACTICE*

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This paper is centered about the tests (1) Complete blood count, (2) Urinalysis, (3) Kahn. An attempt to apply these tests and a few other procedures to general practice is made. I have also included a few remarks on treatment.

After being associated with laboratories for years and then becoming engaged in general practice where there is no laboratory, one cannot but help feel lost. Bacteriological cultures, blood chemistry, basal rates, and electrocardiograms are things long hoped for but seldom enjoyed. There is no question that the E. K. G. is a most wonderful aid in the diagnosis of acute coronary occlusion, but we who practice in the rural districts must be content with a baumanometer reading or the presence of a friction rub. A distant heart sound means more to us than "T" waves.

When I am confronted with an atypical case which looks like it might be early pneumonia and if this case is in one of the towns, I make a bedside chest picture. My portable machine is very efficient. With the advent of rural electrification I am using it more. Chest pictures are very helpful especially where there are no easily detectable signs as in central lobar pneumonia. On the other hand, if this questionable case is several miles from Mt. Vernon in the country a white blood count is somewhat characteristic in pneumonia. The W. B. C. count is normally between 8-10,000 cells per cu. mm. and in pneumonia it may be 20,000-30,000. A high white count and temperature with elevated pulse and respirations may be all that is found early in lobar pneumonia. After 24 to 48 hours in coronary occlusion there is usually a temperature and in a few hours a leukocytosis. Without an X-ray or an E. K. G. even these two conditions may confuse one. Particularly is this true in left-sided pneumonia. I also stain the sputum in pneumonia with methylene blue and have the sputum typed whenever possible.

In the event that sulfapyridine fails the type of pneumococcus is then known. If the serum is available for this type it can

then be given. Whether the serum treatment which costs on the average of \$75.00 should be dispensed with in the favor of sulfapyridine which costs 1/10 of this amount is not yet decided. However, it is said that the drug produces wonderful results in all 32 types of pneumococcic pneumonia. A complete blood count and urinalysis should be done daily on patients receiving this drug. It is better to use the less toxic product, neoprontosil, in streptococcic pneumonia, in my opinion. Until more investigation has been carried out it is better to rely upon both serum treatment and sulfapyridine in pneumonia.

The concentration of sulfanilamide in the blood should ordinarily be from 8-12 mgms. per cent. This can be determined inexpensively on oxalated blood specimens.

Recently I treated a patient, age 84, female, who had clinical bronchial pneumonia. The sputum contained short-chained streptococci and staphylococci. The staphylococci were not contaminants. Treatment with sulfanilamide and staphylococcic bacteriophage gave good results. She had also had a cough for several years. In this connection tubercular sputum may also contain these two germs as secondary organisms. Thus I believe that sulfanilamide may also be of benefit in tuberculosis just as it is in gas bacillus infections. In gangrene the streptococci thrive in symbiosis. Destruction of the aerobic streptococci aids in overcoming the gas infection.

In the diagnosis of early pulmonary tuberculosis several sputa examinations should be done because early there may be only one flake of pus in the sputum for several days. In beginning tuberculosis the bacilli can often be found in the early morning sputum when they cannot be detected at any other time. It is in beginning tuberculosis that we can do something. The sputum of infants and children is usually swallowed and therefore cannot be obtained. In this case examination of the feces will sometimes detect the tubercle bacilli. In this connection I may also add that when the quantity of sputum is small there may be no cough, the sputum reaching the larynx by action of the bronchial cilia. Blood streaked sputum is suggestive of tuberculosis and is more common in the early stages than later. It usually indicates an advancing process. While speaking of the gross ex-

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amination of sputum I would like to say that early acute bronchitis gives a mucoid tenacious sputum which may be misinterpreted for the sputum of lobar pneumonia. Lobar pneumonia cases have a "rusty" and "prune juice" sputum which is also very tenacious.

The tubercle bacillus is called an acid fast bacillus because the acid does not remove the fuchsin which stains it red. There are other acid fast bacilli, particularly of importance is the one found in old distilled water. So that in preparing staining solutions or in rinsing films we should have freshly distilled water. The smegma bacillus, another acid fast bacillus, may be found in a particular lung gangrene condition, which characteristically shows no pus cells on staining.

Occasionally a pleural effusion will show numerous tubercle bacilli when a tubercle at the periphery of the lung containing bacilli has broken down. As a usual thing a guinea pig inoculation is required to make a diagnosis of tuberculous effusion.

Blastomycosis of the lungs should be considered when repeated stains for tubercle bacilli are negative. Diagnosis rests upon demonstrating the organism in the sputum by using 10% sodium hydroxide. The X-ray in this condition gives a cotton puff—"fluffy" appearance. Extensive disease on X-ray without cavitation is also suggestive of blastomycosis. Metastatic tumors of the lung may simulate this condition on X-ray.

The following is a discussion of the complete blood count.

Active tuberculosis is accompanied by an increase in the total white cell count which may be 12,000-20,000. Activity of this disease may take place in two ways. First, by the breaking down of a tubercle; secondly, by the formation of new tubercles. The former method may be accompanied by an increase in polymorphonuclear cells and the latter by an increase in monocytes. This is according to some workers. In terminal tuberculosis there may be a leukopenia. In chronic cases with no cavitation which have shown no changes on X-ray for six months the total count is usually normal but there is usually an absolute increase in lymphocytes to as much as 50%. In active cases there is a relative increase in lymphocytes. The sedimentation rate of the red blood cells is

an important prognostic test in tuberculosis. The white count is not only of value in pneumonia and tuberculosis, as I have shown, but also in typhoid fever and influenza it is useful. These latter two give leukopenia unless accompanied by a complication.

A leukopenia may be present in pneumonia and may mean a fatal outcome. The total white count may not be elevated in an occasional case of gangrenous appendicitis. However, the differential white count will be of assistance. The W. B. C. is apt to be higher in acute salpingitis than in acute appendicitis. However, in questionable cases the S. R. of the red blood corpuscles may point to salpingitis, the latter causing a fall, while appendicitis does not change the rate of fall of the cells to any appreciable degree. The highest counts are obtained in leukemias. Here also the differential count is important in diagnosis. The differential count: An eosinophilia may be present in intestinal parasites or trichiniasis. A guide as to whether a mild arsphenamine dermatitis is progressing toward exfoliative dermatitis is the eosinophil count—an increase pointing toward the severe type. Presence of eosinophils in the nasal secretion may mean allergic rhinitis. Increase in monocytes occurs in chronic amebic dysentery and bacterial endocarditis. Finally, an acute sore throat during arsphenamine treatment should be studied by means of a total white count to rule out agranulocytosis which may be the etiology of the sore throat rather than lues.

The red blood cells and hemoglobin are reduced in tuberculosis, syphilis, dietary deficiency, hemorrhoids, bleeding peptic ulcers, following acute hemorrhage—these are obviously secondary anemias. Immediately following an acute hemorrhage, however, there is a hemoconcentration and the r. b. c. and hemoglobin are above normal. After the blood volume is restored to normal there is an anemia. Immediately after hemorrhage we also find a leukocytosis of 15 to 20,000 cells per cu. mm. These are the types of secondary anemia which I most frequently encounter in my practice. In direct contrast to the above we find an increase in red cells and hemoglobin in Polycythemia Vera and Ayerza's disease. The only case of the former which I have ever observed was in a physician. The red cells are re-

duced in pernicious anemia unless there is present in the affected individual either a spontaneous or therapeutic remission. After treatment with liver extract the cells may go to 6,000,000 per cu. mm. In more than two-thirds of the cases the hemoglobin loss is apparently less than the loss of red cells on account of the macrocytosis. The color index is therefore higher than in secondary anemia. Pernicious anemia is also a macrocytic anemia. In pernicious anemia the dorsum of the tongue is unusually smooth. It may be a fiery red due to associated glossitis. Syphilitic manifestations of the tongue may simulate P. A. Weakness may be the first complaint in P. A. Lemon yellow skin, paresthesias, and diarrhea are also typical. Macrocytes may occur also in sprue, pellagra, pregnancy, and carcinoma of the right colon. Unexplained anemia occurring in patients above 40 should lead one to examine the colon. Macrocytes occur in cirrhosis of the liver, however, this is a hypochromic anemia. In hemolytic anemia, which may simulate P. A. clinically, the reticulocyte response is helpful and there is an increased fragility of the red cells to isotonic salt solution.

In secondary anemia the sedimentation of the red blood cells may be accelerated. In rheumatoid arthritis which is often associated with a hypochromic microcytic anemia the sedimentation rate must be corrected for anemia. Increase in sedimentation rate occurs in rheumatoid but not usually in degenerative arthritis. Pernicious anemia may occasionally be associated with an arthritis. The Cutler method for sedimentation which I have demonstrated is not corrected for anemia.

Before leaving the subject of anemia it is interesting to note that the more recent workers are placing more emphasis on the deficiency of several factors as the cause of most anemias. These factors are the specific antianemic substance found in liver and stomach tissue, iron, minerals, "good quality" protein, and certain vitamins, particularly vitamins B and C. It has also been brought out that liver extract is only as active as the amount of vitamin B which it contains. Bone marrow studies from sternal punctures are adding to the study of anemia.

In the diagnosis of syphilis we must be cautious in the interpretation of the Kahn. The Wassermann test has been done away with in most laboratories.

This test was interpreted as one plus, two plus, etc. This interpretation was purely a personal equation. The Kahn is interpreted as doubtful, positive or negative. Furthermore, the patient should be diagnosed and not the test tube. In a county where there are no negroes one would expect to find less syphilis and no sickle cell anemia. The latter is true, i. e., no sickle cell anemia. The Wassermann was not a specific test for syphilis. Positive tests occurred also in yaws, relapsing fever, trypanosomiasis, pellagra, tubercular form of leprosy, scleroderma, certain fibrous tumors, diabetes with acidosis and tuberculosis. The latter two giving weakly positives. The Wassermann or Kahn may not become positive for days or weeks after the appearance of a chancre. Obviously diagnosis in the seronegative stage by dark field examination of chancre exudate is the ideal thing for the patient. The blood may be positive and later become negative in congenital syphilis without treatment because there was no transfer of spirochetes through the placenta but merely transfer of antigen.

Examination of the urine is an easy task and at times yields enlightening information. An alkaline cloud of phosphates clears upon addition of acid which is added to the test tube in the determination of albumin. I have had patients come to me for this condition alone. The specific gravity of the urine is low in chronic interstitial nephritis, diabetes insipidus, and in many functional nervous conditions. It is high in fevers, diabetes mellitus, and parenchymatous nephritis. A high specific gravity when the urine is not highly colored, or when the quantity is above the normal, should lead one to suspect diabetes. In any form of nephritis a sudden fall of specific gravity without a corresponding increase in the quantity of urine may foretell approaching uremia. There may be a glycosuria without diabetes mellitus, or there may be diabetes mellitus with no glycosuria. These findings are due to variation in the renal threshold and to the following facts:

- (1) Sugar may appear following meals or examination in the office.

- (2) It may also be present in skull fracture or pituitary disease.

- (3) Persistent glycosuria may follow injury to the floor of the fourth ventricle.

- (4) Sugar may appear during pregnancy which is lactose and can be differentiated from glucose by fermentation of

yeast. Yeast does not ferment lactose.

In pyelitis the urine contains sufficient pus so that it can be seen without centrifuging the specimen. If clumping of the pus is seen this adds further to the diagnosis of pyelitis. In pyelitis the pus may be intermittent due to the temporary blockage of the ureter on the diseased side. There is much more albumin in pyelitis than in cystitis for the same amount of pus. Pus in the urine with no bacterial growth in ordinary cultures is strongly suggestive of urinary tuberculosis. In this latter the reaction is usually acid and the volume is apt to be increased. Constant or intermittent blood in the urine, moderate or very marked, is the only urinary sign which occurs with any degree of regularity in malignancy. It is of interest to note that in phenol poisoning the urine turns olive green and later brownish black on standing.

The Friedman's test for pregnancy is based on the presence of anterior pituitary hormone in the urine. The urine should be obtained in the morning in a sterile container. Bacteria in the urine will kill the rabbit after the urine is injected into it.

It is interesting to note that the pregnancy test may be positive in teratoma testis.

The following tests are commonly done in general work: In obtaining specimens from the mouth in Vincent's ulceration the ulcer should be cleansed first by careful swabbing to remove other saprophytic organisms, so that the smear will show the etiological bacteria without difficulty. The etiology of trench mouth is the *Spirocheta Vincenti* and *Bacillus fusiformis*. These organisms should be abundantly seen before attaching importance to them because they occur in the mouth normally. Likewise differentiation between *Klebs-Loeffler* bacilli and diphtheroid bacilli may be difficult. Determination of the virulency is sometimes necessary. Tissue examination from tubercular ulcers is not always accurate. However when the organism is seen intracellularly it is known to be from oropharyngeal tuberculosis and has not lodged there from expulsive cough. In suspected diphtheria the material is inoculated on Loeffler's blood serum and allowed to incubate for 18 hours. At the end of this time the growth is stained and examined.

There are three methods commonly

used in the laboratory diagnosis of typhoid. During the first few days the blood culture may be positive. After a week or ten days the Widal reaction may appear. This agglutination test may not appear especially in infants with the disease. The stool culture may be positive in the third week. The Widal reaction may be positive following an attack of typhoid fever or following inoculation for the disease. Above I mentioned that a leukopenia was present in typhoid. Early there may be a slight increase or a normal cell count with a gradually progressing leukopenia.

The gonococcus is a gram-negative intracellular diplococcus. Smears reported as gram negative extracellular diplococci should be considered as suspicious of gonorrhea. It is my experience that it is much easier to obtain positive smears from the female urethra than from the female cervix. It must be borne in mind that gonorrheal cystitis, though not common, does occur.

The gastric analysis is done on specimens aspirated one hour following a test meal. Personally I use a biscuit of shredded wheat and tea. Examinations performed following histamine injections are probably more accurate. In peptic ulcers we usually find a hyperacidity; while in cancer of the stomach there is usually a hypoacidity. In pernicious anemia there is a total lack of free hydrochloric acid. In fact, the presence of this acid in the gastric contents casts grave doubt upon the diagnosis of pernicious anemia. Cancer of the stomach may also occasionally be associated with absence of free HCl. The presence of lactic acid may be a suggestive symptom of gastric cancer. Carcinoma seems to furnish an especially favorable medium for the growth of the Boas-Oppler bacillus. Anemia associated with cancer of the stomach may also be of the macrocytic type. Final diagnosis must rest upon X-ray study following barium meal.

In closing I would like to add that while others are becoming "vitamin-hormone-sulfanilamide" conscious it is best that we as general practitioners remain "blood count-Kahn-urinalysis" conscious. And thank you for your kind attention.

REFERENCES

- Clinical Diagnosis by Laboratory. Methods, Fodd and Sanford.
Laboratory Manual of Hematology, Beck.
Internal Medicine, Musser.

EXHIBITS OF THE A.M.A. AT
ST. LOUIS, MAY, 1939

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The exhibits were so numerous this year that I am trying to be as brief as possible, giving only a paragraph to the important features. It is my hope that these notes will be of some value to those who did not attend the convention, and that they can be used as a record for future reference for those who visited the exhibits in St. Louis.

In the exhibit on cancer of the face, nose, tongue, and lips were numerous photographs of very far advanced growths. One would think that lesions so easily seen as these would certainly come to treatment in an earlier form; but it seems that the growths get as far advanced as internal cancers, and the mortality is naturally much too high, because all these lesions are curable in any reasonably early stage. The exhibitor advocated treating very early growths with radium, and removing the advanced growths with the electric cautery following X-ray treatment. Large areas removed with the electric cautery, followed by skin transplant, give a very satisfactory cosmetic effect, which, of course, should always be secondary to getting rid of the cancer.

Cancer of the esophagus can be removed from almost any part of the esophagus. The lower end is removed transpleurally, and the proximal end is attached to the stomach by a new opening. The collapse of the lung in this operation is easily overcome by negative pressure. The lower end of the esophagus has very poor circulation, as has been shown by the Japanese; so the resection must be up in the more vascular area. Even the entire esophagus can be removed, the proximal and distal connection being made by a combination of glass and rubber tubing, which is external to the body. Seventeen such cases were reported.

In another exhibit tumors of the neck and head, mostly carcinomata, were handled very similarly to those of the exhibit above.

Cancer of the caudal bowel must be gotten early before extensive glandular involvement. Operative technique has been greatly improved. Even the descending colon now is brought down and the anus

utilized, instead of the former artificial colostomy.

Another exhibit of mouth and face cancer showed that even the entire nose is removed, and an artificial nose fit on with glasses, the temples (ear rims) of which hold the false nose in position. It is so like the regular nose that it is not noticeable five feet from the patient. Extensive carcinoma of the antrum can be removed with a good deal of the face. Plastic graft can cover in the void taken from either the forehead or chest or both. Complete removal of the tongue for carcinoma was shown in another exhibit. One patient was reported well eight years after operation, and another one, twenty. Most of such cases require complete dissection of glands and gland-bearing tissue in the neck.

One exhibit showed how to differentiate carcinoma of the lip from: 1. cracked lip; 2. leukoplakia; 3. lues, primary or tertiary; 4. granuloma inguinale. Naturally biopsy is the chief point of differentiation; and where syphilis is known to be present, biopsy is advocated before much anti-luetic treatment, as a carcinoma might otherwise be neglected until advanced. Wide excision with the cautery is advocated, with radium and X-ray used in conjunction. These growths, like other carcinomata, have different degrees of radio-sensitivity.

Another exhibit brought out that jaw bone carcinoma is often missed, even by use of the microscope. Any serious bone involvement of the lower jaw is significant of carcinoma.

The American Society for the Control of Cancer is certainly doing a big work, and their bulletin should be carefully scrutinized by all physicians. The bulletin is mailed free to all doctors on request. They advocate early examination by a physician, not by any doctor, but by one who has an eye for carcinoma.

One wonderful exhibit was that for resecting carcinoma of the head of the pancreas, and a transfer of the resected pancreas to an anastomotic opening in the stomach. Carcinoma of the pancreas is also often encountered when the abdomen is opened for other pathology. The exhibit emphasized the importance of not opening an abdomen unless one is prepared and equipped for any major possibility, and a resection of any part of the pancreas is indeed a very major procedure.

Study of cancer of the uterine cervix and breast should be taken up by women's groups and societies. Women should do this in self-defense, as many fine members of their ranks lose their lives by cancer of one of these two organs. Deaths from these causes should all be preventable. The early signs should be drilled into our women until they are "cancer-minded."

One of the most sensational exhibits was the freezing treatment for advanced carcinoma. It has been found that cold retards the growth of the embryonal cell and the cancer cell. Infection is also improved because of the bacteriostatic effect of cold, while healing goes on. Many practical appliances were shown for applying circulating cold from the cold water of the frigidaire, also pictures (before and after treatment) of many cases of carcinoma that had been treated. Metastatic lesions of the lung are improved. Cancer cells are affected by 95° or lower. The optimum temperature for incubation of chicks is 100.5°. At a temperature of 90° to 95° chicks grow with a great many abnormalities and malformations, many of them having stunted growths, and many of them dying. Temperature for cancer of the breast can be reduced to 40° Fahrenheit by a coil of rubber tubes containing circulating water. The coil is shaped round to cover the breast and area of metastasis. This process, which is termed hibernization, is preceded by starvation and sedation, and lasts four days. The patient sleeps and cannot be aroused, but is sensitive to pain. Avertin is used first to start the sleep. A thermocouple recording of the surface temperature is kept constantly going; transfusion may be used. Room temperature is 60°, and a continuous rectal temperature is also kept. Cessation of kidney and bowel function continues through the period of hibernation. The patient awakes with increased appetite, and feels good. The rectal temperature goes as low as 83.7° Fahrenheit in carcinoma of the cervix. This method is a new departure; and as it is used only in advanced growths that are beyond the stage of operability and hopeless for any other therapy, it is to be watched with a great deal of interest.

A new diagnostic point brought out in another exhibit was the determination of blood amylase. Acute pancreatitis is usually diagnosed as acute cholecystitis, but they may be differentiated by this test.

Plastic operations in children are becoming of more importance all the time. Good looks are more important in children than in adults, as their lives are ahead of them. Many of the conditions that affect his appearance give a child an inferiority complex that handicaps him in any pursuit that he may follow in life. One of the conditions mentioned in the exhibit was flop ears. The child is usually nicknamed such names as "jug handles," "airplane wings," and so forth. These conditions, of course, can all be corrected by plastic operation. Similarly, may saddle nose, which in this exhibit was being corrected by inserting a piece of stock cartilage, always kept ready in an aqueous solution of merthiolate (one to three parts water). The stock cartilages are secured at autopsies, and thus save the wound and scar that result from taking an autogenous graft from the child's own rib.

A movie of Mirault's harelip operation and also of cleft palate showed a simple and practical operation.

Lesions of the neck were wonderfully portrayed for teaching purposes, with life-sized models made of a latex-like composition. Everybody was asked to palpate the many and various lesions to be found in the neck, such as cystic adenitis, hygroma, the various forms of goitre and thyroid disease, Hodgkin's disease, actinomycosis, lymphatic glands, thyroglossal and branchial cysts. These two last are often confused. It is important to know the difference when operating on them. Branchial cyst is the remains of an embryological duct of the thymus gland; while thyroglossal cyst is analogous pathologically to the same of the thyroid gland. In operating, the duct must be completely dissected out, or it will recur or be followed by a persistent sinus.

It was shown in another exhibit that silk does better in clean wounds, and catgut in contaminated wounds, the smaller the catgut the better. In another very extensive line of experiments it was shown that an alloy of steel wire is better tolerated with less irritation by most of the tissues, including the peritoneum, than either catgut or silk. Even in gastro-intestinal work this exhibitor advocates the use of steel wire.

One exhibit that was especially interesting to the general practitioner illustrated the frequency with which bronchiectasis is treated for tuberculosis. Both

have cough, expectoration, and hemoptysis. They are now differentiated by the use of lipiodol and X-ray. Bronchiectasis is cured by lobectomy. Certainly the differentiation is a very important point to remember for proper treatment of the patient.

One practical demonstration of the simplified use of oxygen with a new inhaler expounded the use of oxygen in medicine, surgery, and aviation. The exhibitors also differentiated migraine and other forms of headache by the use of oxygen. Inhalation of 100% oxygen, if started early, will relieve migraine in from thirty to sixty minutes. Other forms of headache are not benefited.

Another booth showed eighty cases of stricture of the common bile duct, and many forms of plastic repair and anastomosis. As these conditions constitute the most difficult kind of surgery we encounter, any advancement in technique is always gratefully received.

Another condition that is very often difficult is vesical diverticula. The exhibit showed a new technique of dissecting off the mucosa by the electric knife, and closing the bladder at that point, draining the pocket behind the bladder wall.

There are a great many extra-rectal diseases that are often mistaken for rectal cancer, such as: metastatic cancer outside the rectum, as well as many benign conditions; myoma of the uterus, especially the sub-peritoneal type; scybalum; cancer of the prostate; endometriosis, and other pathological masses in Douglas' cul-de-sac, such as adhesions of the intestine or ovary, abscess or cancer of the ovary.

One of the most exhaustive exhibits ever shown in any medical society was one of urology, showing graphically diagnoses of the genitourinary tract, together with the organs, the treatment, and the handling of pathology, differentiating the various types of infection and treatment for each. It showed the many causes of hematuria. Most of the pathology was illustrated by enlarged wax models of the entire genitourinary tract. All the operative procedures were given, step by step. The great strides in transurethral surgery for enlarged prostate were shown, as well as cancer of the prostate, prostatic calculi or abscesses, and bladder tumors. Stones in other parts of the kidney and ureter were well shown.

One very interesting exhibit showed the effects of drugs on the ureter, giving the

modus operandi of the drugs. Those that tend to relax the ureter are benzedrine, ammi visuaga, adrenalin, and avertin. Those that contract are acetylcholine (temporarily), mecholyl (more prolonged), and prostigmin. Those that relax by neutralizing the parasympathetic innervation are atropine, pancreatic tissue extract, padutin, and hyoscyne.

The exhibit showing that peptic ulcer and C. A. of the stomach can now be definitely differentiated was most interesting to X-ray men, as it presented a very large number of X-ray films.

Diseases of the gastro-intestinal tract are being operated on with constant improvement in technique, and thus a perceptible lowering of mortality. This is interesting to physicians generally, because so many of them suffer with diseases of the intestinal tract. This advancement in technique is true of all abdominal surgery, which was shown in a large pictorial, illustrated in color. Interesting, too, were the improved newer methods of handling advanced peritonitis. We are destined to get advanced cases for a long time to come; and as we have to take them as they come in, we must try by all methods to improve our technique.

Handling of gangrenous gall bladder and C. A. of the sigmoid by use of a glass chimney (reported in my previous notes) was one of the most popular exhibits at the meeting.

A set of illustrations showed experiments proving the hyperphyseal influence on renal function. The hypophysis was shown to exert an intimate control over the renal function.

One exhibit showed Heberden's nodes, which is a hypertrophic arthritis of the terminal phalangeal joints, and which is a very common and disabling condition. This study showed that it is definitely hereditary. Also, a traumatic form exists, of which so-called baseball finger is an example. Gout may simulate this condition. The treatment thus far is entirely symptomatic.

Fibrositis, a rather new terminology, constitutes about 60% of treated rheumatic cases. Doctors are too prone to call too many things rheumatism, and not get to the pathology of the existing condition. Fibrositis means an inflammation of the white fibrous tissue in nerve and muscle sheaths, periarticular structures, etc. It is not usually disabling, and the tendency often is to prescribe salicylates

or other rheumatic treatment, which usually do not help the patient except temporarily. Fibrositis tends to become chronic. The etiology is often obscure. Much can be done in the way of treatment with physiotherapy, massage, exercise, and vaccine. The latest therapeutic agent advocated is iontophoresis of mecholyl (Merck & Co.), used with the galvanic current. The mecholyl is used in solution, one to five hundred. A wet cloth is put under the positive pole of the galvanic current, using from eight to ten milliamperes a half hour daily. A new vaccine prepared by Warren Crowe of Charterhouse, London, has a desensitizing effect upon the toxic agent of fibrositis. The vaccine is given with the idea of desensitization in doses of not over 100,000 organisms at each injection once a week, and later on once every three weeks.

Chronic arthritis was illustrated in other booths. It is now being more accurately classified, and these classifications were well exemplified in an illustrated exhibit.

Sulfapyridine is now given universally in not only pneumonia but also in bacterial endocarditis, meningitis, and peritonitis. Methods of handling were graphically illustrated with fever charts. Methemoglobinemia and cyanosis are controlled by methylene blue orally.

An exhibit showing a new way of preserving blood for transfusion was awarded the gold medal. The blood is stored at 5° Centigrade, at which temperature no hemolysis occurs. The addition of dextrose (glucose 5.4%) also diminishes the tendency to hemolyze. The blood is citrated, and chloride of sodium can also be added. Exclusion of all atmospheric air diminishes the tendency to hemolyze. Heparin is not used because of the expense.

A practical point in the early discovery of tubercle bacillus is the examination of the gastric contents before breakfast, and inoculation of same in guinea pigs. This has been used for a long time in children, but is just as valuable in adults. Some manufacturing concerns are now routinely examining for tuberculosis their employees who are under twenty-five years of age.

Under clinical endocrinology a new adrenotrophic factor is now gotten out, called A-P Adrenotrophic (Armour). Eschatin (Parke-Davis) is a similar prep-

aration. Testosterone propionate has proven very valuable not only for hypogonadism, but also in the male climacteric and enlarged prostate. Start out with large doses, 75 mgs. per week; then 10 mgs. in oil weekly. This has also shown a specific action for involutional melancholia, similar in action to Theelin in the female.

The preliminary study of the use of potassium in high fever and allergic conditions shows great promise. It may be used in the form of potassium chloride, five to twenty grains, T. I. D., or a combination of potassium citrate, acetate, and bicarbonate, three and one-half grains of each T. I. D.

X-ray visualization of chambers of the heart, the pulmonary circulation, and the great blood vessels in man is indeed a distinct advance in roentgenology. Diodrast is used to show the tree of the pulmonary artery. This exhibit received the silver medal.

A further contribution to pulmonary pathology was the diagnosis of pulmonary embolism. Also shown was an experimental aid to therapy by means of a mechanical device acting as a substitute for the heart and lungs. This is not the Lindbergh heart, but is a very complicated apparatus. A picture of a cat thus kept alive eighteen minutes and living after fifty-three days was shown. This is a step and a hope to make it practical some day for the removal of pulmonary artery embolism.

Streptococcus is now produced in dogs by feeding the streptococci orally, and then cured by merthiolate and sulfanilamide. The same treatment has been used in man, but has to be given in much smaller doses than in the dog. A close watch on the effect of the kidney output is very essential.

The range of normal blood pressure was shown in a very large experimental study to be 120/80 for all ages. This refutes the idea that older persons are allowed one point rise for each year of age. Increase in blood pressure always means pathological change somewhere. Hypotension is never a disease, but a sign of health. Obesity is one great cause of hypertensive conditions. Obesity and hypertension are diseases of civilization. This was a very practical exhibit, and carried much information.

An exhibit showing the function of the

frontal lobe of the brain in man and monkey received the bronze medal. It was a good review of the brain areas. It exemplified especially that the frontal lobe constitutes the chief difference between the brain of man and monkey.

Mineral content studies of the nervous system by micro-incineration and spectroscopy in analysis of a great many diseases of the nervous system show a deficiency of these minerals. It further exemplified the fact that to supply the deficient mineral to the G. I. tract may not always help the patient, because of a lack of absorption or metabolism of the deficient mineral. This study will probably develop a practical aid in treatment, and many of the otherwise intractable diseases of the nervous system will be benefited by the deficient minerals supplied in the form that they will be assimilated.

A very interesting and practical study of infiltration anesthesia, and especially superficial cervical block and deep cervical block, attracted a good deal of attention. The agent that is advocated is a 10 c.c. mixture containing 1% novocaine and cobefrin 1 to 40,000 for the deep cervical block. There were illustrations showing the exact point of entrance, size and direction of the needle to catch the various cervical nerves.

Anesthesia had a special exhibit, and contained a great many booths. It required a great deal of close study even for one well informed on anesthesia to grasp the progress it is making. The exhibits on local anesthesia demonstrated especially the necessity of having an exact anatomical background, and one must be quite a surveyor of topography to master it. Local and infiltrating, being the safest of all anesthetics, is deserving of much study. Intravenous anesthesia was also well illustrated, and a good review of general anesthesia was made.

A new thermoplastic, splendid for fractures, was shown and demonstrated. It is easily molded to any shape by simply dipping the splint into hot water. It hardens rapidly on cooling. This new splint, which is not yet on the market, has many advantages over other forms of splints, and is especially valuable in treating fractures around the wrist joint.

One exhibit demonstrated supracondylar fractures of the femur, treated by hyperextension. This tends to correct the backward displacement of the distal frag-

ment, and is along the same principle as acute flexion for treatment of fractures around the elbow joint.

Treatment of ununited fractures of the neck of the femur is improving, and merited the running of a film continuously in one booth. The exhibitor emphasized the fact that the method must vary according to the exact pathology. Lateral X-ray films are a great advancement in handling such fractures.

A large exhibit of dried pelvises showing accessory sacro-iliac articulations in both male and female, white and colored patients, would have required a great deal of study to comprehend, but the task was made easy by chalk marks to indicate the exact points of pathology. The accessory joints are not shown in books on anatomy or orthopedic surgery, but no doubt many a backache, especially low backache, was the result of such malformations.

Pleurisy with effusions shows many forms with various underlying pathological lesions. The booth contained some sixty-five films analyzed with a checkup and short history of each. So pleurisy with effusion is not so simple, but is a diversified and complex pathological process.

Syrup of Cherry, a national formulary product made of tame cherries and not a wild cherry syrup, is advocated to disguise most bad-tasting medicine. Syrup of Cinnamon is advocated for salicylates, and Syrup of Licorice for bromides and iodides. These national formulary preparations should be studied and doctors should certainly do more prescription writing.

New points on Colles' fracture are always acceptable, as it is one of the most common types, and one in which perfect results are seldom obtained. Plaster of paris is being more and more universally advocated. Finger motion must be obtained early, and this motion must include opposing the thumb to each individual finger. After one week pronation and supination must be started. The surgeon must avoid the possible frozen shoulder. He must counter-extend by holding the upper hand; then he must extend and flex with ulnar deviation. There should be no padding in the splint except stockinet. The patient should practice raising the arm above the head. Some form of physical therapy is useful, and such fractures must

be seen regularly and often to get good results.

Fractures in children are different, and constituted a special exhibit. The study of 1,400 cases was shown. Shortening is often overcome by compensatory growth. Good apposition is not so essential as in adults. Many other practical points were brought out.

The pain of thrombophlebitis was shown to be the reflex factor of vasospasm, and treatment is therefore by sympathetic nerve block. This treatment is very practical. We recently used it on a patient with complete relief. Vasospasm of the arteries is due to reflex action from the thrombosed veins, and is the chief factor of the pain. These theories were amply proven by experiments on dogs before use on human beings.

Survey of thyroid disease in Georgia corresponds closely to that of Kentucky. Hypoparathyroid disease occurring without tetany is often overlooked and occurs in 1% to 2% of thyroidectomies. It may be mild or serious, and is relieved by calcium dehydrotalysterol A. T. 60 (dose of which is 5 to 10 drops daily).

One of the exhibits that received an award of merit showed the use of a new kind of electrocardiograph, using television principles, which will enable one to see the record of the patient's heart action instantaneously without waiting for development of photographic film or electrocardiogram tracing. This machine is adapted for diagnosing some forty cardiac conditions. It can be used in a doctor's office by simply attaching to an electric light socket, or even in the patient's home. It also can be adjusted to the standard electrocardiographs now used. The apparatus is not on the market yet, but it bids fair to simplify and generalize the diagnosis of the many heart conditions. Too many persons are dying of heart disease, but the many splendid heart exhibits showed that the profession is not asleep at the switch.

Acute segmental appendicitis was shown in experimental and clinical studies. Though the appendix is a small organ, acute segmental appendicitis does occur, and rarely is the whole appendix affected. Too large a stump left after appendectomy may result in a future acute attack (we have had one such case with an enterolith in the stump).

A new operative procedure was given for the treatment of trigeminal neuralgia, and a similar operation for paralysis agitans, also athetosis of young persons, and allied conditions, such conditions being corrected by removal of the so-called prefrontal lobe of the brain. The motor area is not touched. A picture of a patient before and after this operation looks very convincing. Similar conditions resulting from trauma, postencephalitis, and poliomyelitis are also corrected in this manner. One such case was still relieved two years and four months after operation, this being the longest case in the series. Best of all, these cases are all able to resume former work.

Another very splendid illustration of plane or fascial burrowing of pus in deep abscess of the head and neck, and the reason why the pus travels thus, showed that in different parts of the head and neck the abscess proceeds through different planes. This is an important contribution, and is not found in books on anatomy or surgery.

The treatment of peptic ulcer by surgery was outlined. Extensively illustrated, this was of great value to the surgeon. It showed many possible locations of ulcers and how each is handled, each procedure being different according to the anatomical site of the ulcer.

A new principle of skin graft exhibited was called calibrated skin graft, an entirely new type of graft. Also exhibited was a new instrument for cutting any thickness, shape, or size of the skin graft. The methods of handling the dressing after graft were about the same as are generally used now, that is, wet dressing with pressure, changed on the fourth day, and thence daily, keeping dressings sopping wet, and so on.

One exhibit showed where the small intestine is of great importance in nutritional deficiency. This was an X-ray study, and demonstrated the relation to vitamin deficiency and relief after vitamin treatment, especially of vitamin B, liver extract, and nicotinic acid. It also showed the condition after the patient has had: 1. resection; 2. gastroenterostomy; 3. pellagra; 4. sprue; 5. ulcer; 6. colitis; 7. terminal ileitis; 8. lipoma of the gastrointestinal tract; 9. polyneuritis; 10. beriberi, and so on.

Weak feet came in for pathogenic study

and treatment, consisting of a practical application of mechanical principles in handling an exceedingly common condition. The care of feet has been neglected a long time, but the profession really has something constructive in the new methods of caring for them.

Manipulative therapy is a big subject, especially for the busy practitioner. The exhibitor advocated using 1% novocaine in 2% saline **once a week for a few weeks**. This naturally makes the manipulation easier, keeps the patient in a better humor, and results in much better cooperation. It is also superior to crude chiropractic methods.

Treatment of peripheral vascular disease by a vas oscillating bed is proving useful in the treatment of poor circulation in the feet, which causes such symptoms as cold feet, swelling, Raynaud's disease, congestive heart failure, and so on. The bed is operated by a motor, which keeps it moving by alternately raising and lowering the head.

Compression reconstruction of recent intracapsular fracture of the femoral neck is simply a new form of pin giving internal fixation. Ample illustrations with X-ray films and steps to the operation were shown. In another booth this was also given in motion pictures.

There was very much on pneumonia: typing, blood culture, early diagnosis, oxygen, serum, and so on, being advocated. Included were also some instructions to the patient, the most important being: "If you suspect pneumonia, go to bed and call your doctor. Be sure that your nurse is a good one." Early diagnosis and treatment are most essential. Mortality has been definitely reduced under the latest treatment. These advances are the most important contributions to the health of humanity and the progress of medicine made in many years.

Roentgen visualization of the placenta in placenta praevia received an award of merit, and very deservedly so, for it is quite an important advance in handling a touchy, dangerous condition.

Hyperpyrexia came in for several booths, showing disease cured or benefited by it in gonorrhea, lues of the nervous system, chorea, rheumatism, and so on. It was used for centuries with the idea that elimination by perspiration causes the good effect. We now know that it

acts by stimulating the defensive mechanism of the body. Hyperpyrexia imposes tremendous expenditure of energy, and at times requires the use of oxygen and carbon dioxide, as well as fluids, minerals, and dextrose, all being used to maintain the body balance.

The new vitamin M proved of value in nutritional cytopenia in young monkeys. The condition is characterized by anemia, leukopenia, loss of weight, ulceration of the gums, and diarrhea, death commonly occurring by the 26th to the 100th day. This condition is not relieved by any of the other vitamins, including B complex. It is relieved by a combination of Brewer's yeast and liver extract, and the name Vitamin M is proposed for the unidentified active vitamin.

Metabolism and therapeutic use of iron were shown. Iron is absorbed high in the small bowel, and eliminated chiefly by the colon. When given to healthy persons, such as blood donors, the hemoglobin returns to normal in half the time. An interesting finding also is that iron has a stimulating effect on hemoglobin formation and does not act as a form of replacement therapy.

Another booth exemplified the responsibility of the practitioner in menopausal bleeding. We must make a positive diagnosis, especially ruling out cancer. No X-ray treatment should be instituted until cancer is ruled out. We must constantly seek to correct current false ideas about the "change of life" prevalent among the laity, which false ideas lead to procrastination that could well prove serious, and often does to thousands.

Probably the most popular feature of the entire convention was the free Budweiser beer furnished those in attendance at the A. M. A. This was an unusual innovation, and exemplified the fact that most doctors are not prohibitionists. The heat wave that week made the treat extremely popular.

Such as ships and brittle barks
Into the seas descend,
They see the glories of the Lord
And wonders without end.
But such as heal the sick and maimed
Do meet more manifold
Amazements, in one midnight watch
Than all the oceans bold.

ENDOCRINE THERAPY IN GYNECOLOGY AND OBSTETRICS*

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All you gentlemen here tonight must have experienced at one time or another in the past few years the satisfying and brilliant results of endocrine therapy. On the other hand, there are no doubt few among you who haven't at the same time known disappointments and failures. Perhaps some of you have been so frequently disappointed that you have discarded this method of therapy except for one or two types of conditions. Be that as it may, gentlemen, endocrine therapy is here to stay and it is our business as clinicians to glean all we can from our colleagues in the physiological and chemical laboratories and to apply their findings in our daily treatment of human ails.

I am fully aware of the fact that much confusion exists in the minds of most of us as to where and why endocrine therapy should be used. This, I am afraid, is the result of our reading too many over enthusiastic commercial brochures which are daily brought before us. As a result, poor judgment is frequently used and a woman is given a "shot" for her excessive uterine bleeding without first investigating the underlying cause. When the woman continues to bleed in spite of our newest treatment, we heap discredit upon endocrine therapy in general. Let us not be too hasty in our condemnation nor too quick in our praise, and let us remember that endocrine therapy is still in its experimental stages.

My purpose here tonight is to discuss those conditions in gynecology and obstetrics in which hormone therapy has been of definite value clinically. To understand the abnormal manifestations of endocrines one must first appreciate their normal functions. It is therefore imperative that we understand the normal physiology of those glands which take such an active part in the sexual development and functions of the female.

NORMAL PHYSIOLOGY

The pituitary gland is the most important of all the glands of internal secretion. It might be compared to the brain of the nervous system with which it is closely

associated. Anatomically and physiologically the hypophysis is divided into three portions; i. e., the anterior, middle, and posterior lobes. As far as we know at the present time the middle lobe does not produce a hormone peculiar to itself. From the point of view of the gynecologist and obstetrician the posterior lobe manufactures but one hormone of interest, i. e., the oxytocic principle found in pituitrin. This endocrine has a direct effect upon uterine muscle causing it to contract.

The anterior lobe on the other hand is rich in hormones of importance to us. From it comes the lactogenic factor which after parturition stimulates the mammary glands to secrete milk. The hypophysis is prevented from manufacturing this product during pregnancy by placental hormones. After labor and the delivery of the secundae the inhibitory factors are removed and the lactogenic hormone is elaborated. However, before this milk producing substance can have an effect upon the breast, the mammary gland must first be "primed" by estrone and progesterone.

The pituitary also elaborates thyrotropic and adreotropic factors which stimulate the thyroid and adrenal glands respectively and probably play an important role in the general endocrine economy. These glands in turn stimulate the pituitary. As yet little is known of their clinical importance.

The next hormone from the anterior lobe of interest to us is the gonadotropic factor which is responsible for the growth and cyclic changes in the ovary. It is composed of two parts: a follicle stimulating principle and a corpus luteum stimulating principle. In the early part of the menstrual cycle the former is more abundant. In the later part of the cycle the latter is more prevalent. Somewhere around the middle of the menstrual cycle (about the 13th day) these two principles reach a certain balance which produces ovulation.

Under the influence of the pituitary gonadotropic hormone an ovarian follicle matures and produces a hormone called estrone. After ovulation has occurred the corpus luteum continues to elaborate estrone but in addition manufactures its own characteristic hormone called progesterone. If ovulation does not occur or if the corpus luteum formed is abnormal, progesterone is not elaborated and its manifestations are not observed.

*Read before Jefferson County Medical Society, May 15, 1939.

Let us now study the effects of these two ovarian hormones which are antagonistic to one another and which are so important to us clinically. The follicular hormone or estrone is responsible for all the secondary sexual characteristics of the female, the growth of the ducts of the mammary glands, and the development of the external genitals, vagina, uterus and tubes. This hormone also depresses the activity of the anterior lobe of the pituitary, causes uterine muscle to be more irritable and is responsible for a characteristic growth of the endometrium. The endometrium under the influence of estrone becomes the proliferative type characterized by dense stroma and simple straight tubular glands without secretion. The corpus luteum hormone or progesterone on the other hand causes the growth of the acini of the mammary glands, inhibits uterine muscle and produces the secretory type of endometrium, which is characterized by thin stroma, convoluted tubular glands with an abundance of secretion. A few days before the menstrum is grossly visible these two hormones decrease in amount in the circulating blood. During menstruation the superficial layer of endometrium is cast off while the basal layer remains constant. After the bleeding has ceased the superficialis is regenerated. It is of interest to note that recent investigations lead us to believe that the endometrium is important in the general body economy, in that it probably helps in the metabolism of estrone converting estradiol into estrone and estriol.

Suppose, however, the woman becomes pregnant. Then certain other changes occur. Soon after fertilization the embryo embeds itself into the endometrium. The chorionic villi elaborate a gonadotropic factor called Prolan which sustains the corpus luteum. Prolan is excreted in the urine and is responsible for our various biological tests for pregnancy. It is composed of two principles, i. e., Prolan A stimulates the follicle of the ovary and Prolan B stimulates the corpus luteum. It is called pituitary-like substance because unlike the gonadotropic hormone of the hypophysis it does not cause ovulation in hypophysectomized laboratory animals.

The placenta continues to grow and soon produces estrone and progesterone

in addition to Prolan. These two new hormones are probably elaborated to safeguard against premature labor and miscarriage. As term approaches, senile changes occur in the placenta which diminish the production of these two hormones. As a result of the reduction in estrone and progesterone labor is initiated. It is of interest to note that not any of these hormones are stored in the body for any great length of time.

CLINICAL APPLICATION

It is important and very fine for us to know the physiology of the endocrine system, but as clinicians we are primarily concerned with the problem of where and how these principles can be applied to patients seeking our council. In employing hormones in therapy certain pitfalls must be avoided. It would be folly to expect the uterine bleeding associated with salpingitis or fibroids to respond satisfactorily to hormones. Our first problem, therefore, is to select proper cases, i. e. carefully studied and in whom all other possible causes for the abnormal state have been eliminated. Furthermore we must remember that comparatively large doses of the hormone are frequently necessary for desirable end results.

There are two ways of treating endocrine cases. We may supply the deficient hormone artificially, as is done when estrone is given for the relief of the symptoms of the menopause. This is called substitutive therapy. On the other hand, under certain conditions a sluggish gland may be accelerated in function by giving the hormone from a second gland. This is called **stimulative therapy**. Of the two methods, stimulative therapy is more desirable because it is more likely to produce permanent results. Lastly, it is important to know that the product of a gland of internal secretion has no direct effect upon the gland from which it comes. Thus estrone has no direct effect upon the ovary.

Let us now trace the life cycle of a woman from the time of conception to old age and see what conditions respond to endocrine therapy sufficiently to warrant its use.

HABITUAL AND THREATENED ABORTION

In threatened or recurrent abortion where no physical cause can be found, the condition may be due to an endometrium inadequately prepared for nidation or a

myometrium which is so hyperactive as to interfere with normal implantation of the embryo. Both conditions are evidence of inadequate progesterone effect. It is therefore logical to give these cases progesterone intramuscularly in doses from 1 mgm. to 5 mgm. daily until the immediate danger is passed. It is wise to carry these patients on small doses of progesterone until well along into the second trimester or even to term to insure a viable child.

GONORRHEAL VULVOVAGINITIS IN CHILDREN

This condition is very interesting in that the infection differs so greatly from that seen in the adult. In the preadolescent the infection very rarely involves Bartholin's glands, Skene's glands, the cervix or the tubes but becomes chronic in the vaginal mucosa. In the adult the infection is self-limited in the vagina and in about two weeks the organisms disappear from the mucosa. Furthermore it is known that most cases of gonorrhea vulvovaginitis recover spontaneously at puberty. It therefore seems that the difference between the adult vagina and that of the child is responsible for the difference in the clinical course of the disease in the two age groups. It would follow, therefore, if the child's vagina could be temporarily converted into the adult type the infection would probably disappear. That is the rationale of estrone therapy for gonorrheal vulvovaginitis in children. The treatment is given in the form of vaginal suppositories containing 0.1 mgm. to 0.2 mgm. of this hormone. One suppository is inserted into the vagina nightly for three weeks and about sixty to eighty per cent of the cases recover completely.

INFANTILE UTERUS

This condition is usually seen in girls in their late teens or early twenties. The patient comes to see you because of amenorrhea or if she has menstruated her periods have been scant, irregular and very painful. On general physical examination she is found to be well developed and in good condition, but on pelvic examination the uterus is found to be small and infantile in type. Why a woman should develop all other sexual characteristics of the female and yet have an underdeveloped uterus is not known. We do know, however, that large doses of estrone will cause this uterus to grow to normal size and that once this is accomplished

oligomenorrhea, dysmenorrhea, irregular menses and amenorrhea frequently disappear completely. Estrone intramuscularly in doses from 1.0 mgm. to 5.0 mgm. every other or third day for several weeks brings satisfactory results in many cases.

FUNCTIONAL UTERINE BLEEDING

This condition is most commonly seen at the beginning or at the end of the woman's menstrual life. The endometrium does not go through its normal cycle but remains in the proliferative stage. This can be readily demonstrated by a biopsy of the endometrium taken at the time of or just before bleeding. The glands become cystic and give the endometrium the appearance of Swiss cheese. This endometrial hyperplasia is due to over stimulation by estrone and implies that the ovary is producing inadequate amounts of progesterone or none at all.

The bleeding in these cases is usually profuse and irregular in length and interval. Pelvic examination reveals no gross pathology but endometrial biopsy shows the characteristic changes of functional uterine bleeding. A diagnosis cannot be made from the history or physical examination alone. A suction curettage must be done and the curettings examined under the microscope before the cause can be determined.

The treatment of these patients varies with the age. Young women with functional bleeding are best treated by stimulative therapy. Pregnant Mare's Serum, 10 units intramuscularly every other day for six doses in the first half of the menstrual cycle, gives good results. Prolan in 100 to 500 rat unit doses subcutaneously every day or every other day in the last half of the cycle also is of value in many cases. Finally, thyroid in small daily quantities often relieves the condition after a few months of treatment.

In older women, near or at the menopause, the ovaries are frequently refractory to stimulative therapy. Much better results are obtained in these cases with progesterone which counteracts the hyperestrogenic effect present. Bleeding frequently stops after several daily doses of 1.0 mgm. to 5 mgm. of this substance. The male hormone testosterone is also of value in this condition because it shrinks the endometrium and thus stops bleeding. It is given intramuscularly daily in 25 mgm.

doses until the desired effect is obtained.

MENOPAUSAL SYMPTOMS

The vasomotor symptoms of the menopause i. e. hot and cold flashes, irritability, insomnia, etc. disappear completely under endocrine therapy. At the menopause estrone is suddenly decreased, due to ovarian failure, and the inhibitory effect upon the hypophysis is removed, allowing the gland to become hyperactive. The annoying symptoms accompanying the climacteric are thought to be due to an excess of gonadotropic hormone from the anterior lobe of the pituitary. Substituting for ovarian deficiency by giving estrone in oil in 0.2 mgm. to 5.0 mgm. doses every three or four days for several weeks relieves the condition. The treatment must be kept up at intervals for some time, but eventually the pituitary readjusts itself and further therapy is unnecessary. The intramuscular administration of the hormone may be reinforced by oral medication of the product in liquid or tablet form.

SENILE VAGINITIS

After the menopause, atrophic changes occur in all the genital organs which make them less resistant to invasion by the usual pathogenic bacteria. The symptoms of this condition consist of itching and burning around the genitals. A thin, irritating, clear or sanguinopurulent discharge may be present. On examination the reproductive organs are markedly atrophic and the usual signs of chronic infection are seen. The mucous membranes are almost transparently thin and shiny. Frequently there are small superficial ulcerations at the introitus or in the vaginal walls. Occasionally bands of adhesions form between two or more such ulcerations and when torn through at examination cause troublesome bleeding.

Estrone intramuscularly or by vaginal suppositories temporarily restores the genital mucous membranes, to the type seen during active reproductive life and the normal resistive forces of the patient overcome the infection. Few recurrences occur once the infectious process is conquered. Should the condition return a second course of treatment is advisable.

DISCUSSION

Edwin P. Solomon: I thoroughly enjoyed Dr. Gordon's paper, the conciseness markedly

enhanced the effectiveness of his presentation. It was a delightful review for us all and certainly we must know these fundamentals in order to treat gynecological disorders intelligently. No doubt when we know more about endocrinology we shall hear and see less of it, as yet the subject is in its infancy.

As Dr. Gordon said, it is impossible to mention all the conditions in which endocrine products are used in gynecology and obstetrics. However, one rather practical field of usefulness for the endocrines is in the management of pre-menstrual breast pain. So often we see women who complain of breast pain pre-menstrually and they are treated with estrogenic substance, most of them respond quite favorably and rapidly. Often, however, despite active therapy no response is noted; let us remember that progesterone too has a place in the treatment of mastoplasia of the breast. As was pointed out, both estrin and progesterone stimulate the breast; one largely the primary bud alveoli and intra-ductular areas, the other peri-ductular and alveolar tissue, thus not infrequently centrally located breast pain may be a manifestation of hyperestrinism and we sometimes derive benefit from progesterone. Peripheral breast pain usually responds to estrogenic substance—when given properly.

One other quite practical use of endocrine preparations is in relieving so-called "after pains" in obstetrics. Experiments have shown that if a strip of uterine muscle is placed in a bath with pituitrin that muscle will contract to a certain degree and with the addition of estrin the contraction will be more vigorous and will contract even further. If progesterone is added to the bath containing pituitrin the contraction will be less forceful than with pituitrin alone. Occasionally we see patients, usually multiparae, who have much discomfort for a few days following delivery because of "after pains"—even though no ergot is being administered. Progesterone will give frequently dramatic relief to these patients and it in no way interferes with normal involution when judiciously given.

Dr. Gordon mentioned the use of estrin in infantile conditions of the uterus. Estrin appears also to cause some growth of the tubes and to increase peristalsis in them, this having been shown rather satisfactorily by Dr. Isidore Rubin with his kymographic studies.

One could talk almost indefinitely about endocrines but I won't!

Let us remember the physiology Dr. Gordon has so ably pointed out and administer hormones accordingly.

it may be necessary to examine under the microscope scales and vesicle tops taken from the margins of the lesions. In positive cases mycelia or spores can usually be demonstrated without much difficulty.

Because of the site of the lesions and the average age of the patient, impetigo is frequently confused with this infection. This disease, of streptococcic origin, generally begins as a tiny erythematous dot or vesicle that grows rapidly by peripheral spread of the infection. As the margin advances the central portion at times clears up, giving the lesions its confusing annular appearance.

Usually, however, the marginal vesicles are larger and more superficial than those due to fungi and because of these characteristics they have a greater tendency to rupture early. When this takes place the discharged serum dries on the surface, giving rise to the development of the so-called "honey colored crusts."

In impetigo the concentric pattern is never seen and the larger vesicle and bullae and associated crusting should aid in making the correct diagnosis.

Pityriasis Rosea perhaps stands foremost among the group of common skin disorders that is frequently misdiagnosed as being due to tinea, although the diagnostic catch-all "acidity" shares the palm in this respect. Fortunately those cases treated as "acidity" go on to an uneventful recovery as pityriasis rosea is a harmless and self-limited disease. On the other hand, woe be it to the patient whose benign pityriasis is treated as a true fungus infection, for it resents drastic medication and topical applications of the usual fungicides often cause its rapid spread and a severe exaggeration of its usual benign manifestations.

The so-called "mother spot" or "herald plague" may at times confuse the most skin-minded practitioner because of its singleness, annular appearance and superficial scaling, but the sudden outburst on the trunk in from five to ten days of multiple, similar appearing lesions, symmetrical in distribution and oval in outline, should strike a responsive note in the dermatologic consciousness of every practitioner and bring before his mental eye the ubiquitous spectre of pityriasis rosea.

Seborrheic dermatitis rarely produces annular or gyrate macular scaly lesions, but at times they do occur and this rarity

ANNULAR SKIN LESIONS OF THE BODY MISTAKEN FOR RING-WORM INFECTIONS*

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Since ringworm infections of the skin are generally thought of as being ring shaped, other cutaneous annular lesions are at times mistaken for them. Because of this morphologic confusion I thought it might be of some value to review, briefly, a few of the more important skin diseases occurring in this form and discuss some of their differential diagnostic points.

The salient characteristics of tinea infections of the glabrous skin that appear as ring shaped lesions are that they most frequently occur on infants or preadolescent children. They usually develop on the face, neck or upper chest and back, and are often associated with the appearance of sharply demarcated zones of partial alopecia due to the same infection on the scalp. The individual foci of infection begin as pin head sized erythematous macules or vesicles that then spread peripherally with partial clearing of the previously involved areas. These central zones may appear roughened or scaly with occasional pin point sized pustules scattered through them, or to the unaided eye they may look perfectly normal.

The margins of such lesions usually are reddish in color and consist of an elevated border of superficial pin head sized papules, vesicles or pustules. These component lesions may appear discrete or merged into a continuous line. Occasionally when these lesions have become the size of a nickle or quarter a new point of infection will develop in their center and again spread eccentrically. This process may be repeated one or several times until the involved area consists of two or more concentric circles that resemble a target or the ripples on the surface of a pond, set up by a pebble thrown upon it.

These spots usually itch considerably, though this symptom is a variable one. Rarely do such areas become more than ten centimeters in diameter and when they have reached that size they may disappear spontaneously.

Often when the diagnosis is uncertain

*Read before the Jefferson County Medical Society, June 19, 1939.

makes their presence still more confusing. Such patterns most often appear in the so-called seborrheic areas, namely the flush areas of the face, the suprasternal or interscapular regions.

They usually develop on an oily skin whose patulous follicles and plugged sebaceous orifices add significant clues to the complete picture. These lesions generally produce some inflammatory reactions in the underlying skin, which takes on a pinkish color, while the overlying scales are of a yellowish tint and on palpation they feel greasy to the touch.

These areas are invariably preceded by or associated with an oily seborrhea of the scalp, which at times extends down onto the eyebrows. The angles of the nose and the post auricular skin are often the site of additional seborrheic dermatitis before the above mentioned lesions make their appearance.

In the course of its development and evolution psoriasis frequently produces ring shaped areas of involvement that may simulate, to a variable degree, the lesions due to tinea. Fortunately such pathologic patterns do not develop early in the course of this disease as the earliest lesions of psoriasis are flattened erythematous papules or plaques, and by the time the circinate forms make their appearance there are usually present other skin manifestations that, even to the uninitiated, look more like psoriasis than ringworm.

These late annular or polycyclic forms of psoriasis rarely itch and their advancing margins are invariably covered with dry micaceous, or glistening white scales, that are firmly attached to the underlying skin. When such scales are forcibly lifted off, multiple, pin point sized bleeding spots appear on the denuded epithelium beneath.

As has been said before, syphilis, the great imitator, produces such a multitude of cutaneous manifestations that it is not surprising that some of them should closely resembles those of tinea circinata. Occasionally such lesions are seen among the early secondary syphilitic skin eruptions, when pea to quarter sized ring shaped areas possessing an elevated, cord-like border and clearing center appear, especially on the face. One of the important differential points in such cases is that these syphilodermata rarely appear in infancy or preadolescence, but generally are

seen in adults who have, or at least should have, reached the age of discretion.

In late syphilitic infections the cutaneous recurrences may also be ring shaped but in such cases the component nodules are larger, more infiltrated and less apt to be fused into an unbroken line. Also there are frequently present marginal ulcerations which on healing leave atrophic scars and characteristic pigmentation.

Finally when in doubt, such associated symptoms as mucous membrane involvement, generalized adenopathy, and positive serology should aid in making an early diagnosis.

This completes the five conditions whose skin manifestations most frequently simulate those of tinea circinata but there are a number of other cutaneous disorders whose individual lesions may be confused with this infection at times.

Among them I might mention Lichen Planus, Erythema Multiforme, Drug eruptions of the fixed variety, Granuloma Annulare, Sarcoids of the Boeck type, the early manifestations of Mycosis Fungoides and Basal Cell Epitheliomas. All of these disorders may produce annular lesions with advancing borders and clearing centers, but in most of them the history of their onset and progress and the presence of associated lesions will greatly assist the physician in making a correct diagnosis. In the last four conditions, microscopic examinations of portions of the excised lesion may be necessary to distinguish one from another.

Due to the relative infancy of this specialty the tendency of most dermatologists at present is to harp on matters of etiology and diagnosis as there is still room for marked advance in both of these fields, but among general practitioners the refinements of diagnosis bear little weight as they are **mainly concerned with curing the disease.**

However, correct diagnosis without its refinements is necessary for effective treatment, which in the case of most skin disorders is now a well regimented though not always a successful procedure.

The importance of a correct diagnosis is illustrated by a post card I received a few days ago from a doctor in Southern Indiana. He said he had just received the June Bulletin of the Jefferson County Medical Society and that he had read with much interest the title of my forthcoming paper. He stated that he had always

had trouble treating annular skin lesions and would I please tell him how I treated mine.

This reminded me of the old saying that "in the dark all cats are black," for apparently his mental darkness on the subject made all annular skin lesions look the same to him. I don't know what I'll tell him.

I hope, however, this brief discussion has thrown some little illumination on the subject for you who have had the patience to sit through this swan song of the Jefferson County Medical Society for the current year.

DISCUSSION

R. N. Holbrook: Disraeli once said of Gladstone after hearing one of his great speeches, "He must have been inebriated by the exuberance of his own verbosity." I do not insinuate that Dr. Rutledge was inebriated, but during the first portion of his address I certainly was, and I did not understand whether Dr. Rutledge described the cutaneous lesion that characterizes acidity or not. I hear that term used in reference to skin rashes. I should like to know if there is such a skin lesion and if so, will Dr. Rutledge describe it.

Robert Cohen: I am not going to say a great deal about annular lesions, but one the dermatologists rarely see is the Lehnendorf-Leiner lesion or erythema rheumatica annulare. Usually when there is a flare of the rheumatic condition the lesion presents itself. They look like the rim of oil or gasoline on water, a sort of futuristic circle that comes and goes. I called the dermatologists to see such lesions when I had charge of the cardiac section of the rheumatics and they relate that they rarely see such lesions. Every time we see those lesions it is a sign that there is an active spread of the rheumatic condition.

Ovarian Activity and Basal Metabolic Rate—

The existence of the temperature cycle suggested the possibility that a metabolic cycle might also be present. Rubenstein presents the data in a study of the basal metabolism rate of fifteen young adult women. The basal metabolic rate was taken in duplicate, the Benedict-Roth machine being used and the usual precautions being taken. The basal metabolic rate fluctuates widely but regularly during the menstrual cycle, the lowest values occurring just before the middle period (about the thirteenth day of a twenty-eight day cycle). The basal body temperature also varies in the same way, the low point coinciding with the most highly cornified (ovulative) vaginal smear. Body temperature and basal metabolic rate seem to be equivalent measures of ovarian activity.

THE TREATMENT OF INFECTED WOUNDS*

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Ambroise Pare, the father of modern surgery, is given more than is his due credit for humility for his famous statement, "I dress the wound, but God heals it." He was stating the scientific fact that one cannot hurry Nature's process of wound healing by strong ointments or boiling oil. The problem that I bring before you this evening is this same old one—the treatment of wounds, infected wounds, since we know of none that are uninfected. We might also add to this the question, Is there any device of modern surgery for hastening the natural process of wound healing?

First of all, let us define a few terms that will be used in this paper.

Latent period. This is the stage of any wound while it is still grossly infected and sloughing and before healing begins. The walls are shaggy with necrotic fascia and non-viable tissue tags. Pus exudes freely and collects in pockets. Active or invasive infection, if still present, will manifest itself by swelling, redness, induration and tenderness.

Surgically clean. With appropriate treatment by the surgeon and adequate resistance on the part of the patient, the wound will, in a few days, "clean up." Slough will have been cast or picked away, pus will be scanty or absent, rosy granulation tissue will now cover walls and base of the wound, and there will be no exposed tendon, fascia or muscle. The lesion is now grossly and surgically clean. This is to be distinguished, however, from "bacteriologically clean," for though the bacteria count is now vastly less than it was during the latent period, some few bacteria will be present till the last tiny granulation has been covered by new epithelium.

Granulating or healing stage. Surgical cleanliness marks the onset of healing or cicatrization. Nor does healing commence till all slough and gross infection is gone. Healing, once started, proceeds as a combination of contraction of walls and base

*Read before the Perry County Medical Society, June 12, 1939.

and filling in with granulation tissue and is complete when new epithelium has grown out and covered the surface. As will be seen presently, the surgical care of these two stages, latent and granulating, is different.

Before proceeding with the treatment of the infected wound it should be recalled that two factors are involved in the healing process, "remote" and "local." Of the remote, these are the chief ones:

a. Age of patient; youth heals more quickly than old age.

b. Nutrition. A high protein diet accelerates, somewhat, the healing process. Starvation retards it.

c. Deficiency in some of the vitamins, especially vitamin C, may be responsible for delayed cicatrization.

d. Distant foci of infection or pockets of pus will, at times, prevent wound healing till they are removed or drained.

e. Debilitation, such as accompanies malignancy, diabetes or nephritis, may defeat the best efforts to heal a wound.

f. Syphilis, formerly blamed for defective healing, is now pretty generally exonerated except where the lesion is actually gummatous.

The local factors are more the concern of this paper but are scarcely more important than the distant ones. These include:

a. Blood supply. It is well known how resistant are infections and ulcers about the feet in those with peripheral arterial insufficiency.

b. Adequate drainage. Many infected wounds drag on because of too small or poorly placed incisions for drainage. The "medical incision" is notorious.

c. A massive local bacterial invasion will delay healing till it is overcome.

d. Presence of foreign material. I recall a hand infection which refused to heal until an embedded splinter was found and removed.

e. Trauma, mechanical or chemical.

f. Degree of immobilization. Theodor Billroth found that thigh wounds in dogs kept active on a treadmill, healed much more slowly than similar wounds in which the limb was immobilized by splints.

Now to proceed to the management of infected wounds in their initial or latent stage. Time does not permit dealing with the remote factors other than to recall again that the patient's nutrition and general resistance is to be built up in severe

wounds by adequate diet, plenty of vitamins, especially C, and transfusions.

If active infection and cellulitis are present, there must be a preliminary period of elevation, immobilization by splint or light plaster cast, and moist heat. This last is supplied by abundant dressings of sterile saline, Dakins, boric, etc. Periodic hot sterile soaks with intervening dry heat are also useful. At this stage any surgery or debridement other than removal of foreign bodies, is strictly contraindicated, since this will open up new channels for spread of infection. The more severe and virulent infections will, at this stage, be best treated by the full Dakin's technique.

At the onset, also, antitoxin against Tetanus and B. Welchii should be given and the wound cultured for the responsible organism. If hemolytic streptococci were found, sulfanilamide would be indicated.

As this invasive stage subsides, probably the most important indication in all the treatment arises; that of assisting nature in removing all sloughing fascia, tendon, or devitalized tags of fatty or fibrous tissue, as well as providing adequate drainage for all collections of pus. Undermined flaps may require counter-incision and pus pockets of any size should be widely incised in the most dependent position. "Dependent drainage" is not without reason a surgical byword. Should the wound under consideration be an infected laparotomy incision, we do not agree with Dr. Gatch who holds that the removal of a couple of skin sutures constitutes adequate drainage, but believe that ruthless and wide opening of the wound as deep as infection extends to allow free drainage and regranulation from the bottom is time saving in the end. When all foreign material has been sloughed or picked away and pus pockets drained, the wound will almost overnight transform itself into the surgically clean wound with rosy granulating walls and progressive diminution in size. But not until this clean-up has taken place will healing commence, nor will any amount of antiseptics take the place of this meticulous mechanical toilet of the wound. This toilet includes, in addition, at each dressing, the careful cleansing of the surrounding skin with sterile sponges of soap, water, and alcohol held with a sterile instrument, not with the fingers; and includes the removal from this area of all crusts of dried pus, blood and staling skin so often taken for granted as the inevitable and natural bor-

der of a wound. Vernon David vividly drove home this truth in describing his hospital experience during the Great War. Due to lack of facilities the elaborate Dakin's technique was limited to certain wards. In the other wards the dressings consisted simply of soap and water and mechanical cleanliness, but the wound thus treated healed just as kindly and rapidly as those in the Dakin's-treated wards.

During this stage in treatment, the choice of antiseptic or, indeed, whether any antiseptic at all be used, we believe is a matter of minor importance.

Lack of time prevents more than a word concerning wounds infected by anaerobic organisms or by the gas bacillus. Briefly, for the anaerobic infection, Meleney's special ZnO₂ as supplied by DuPont has generally been recognized as a specific. For gas gangrene, prophylaxis still is the best treatment, but after infection has set in, prompt heroic incisions (of involved tissue), antiserum, sulfanilamide and X-ray therapy are our best weapons. Amputation may be necessary in the most fulminating cases.

When the wound has become surgically clean and commences to fill in with healthy granulations, the second stage in treatment has arrived.

General care and supportive measures are now even more important than during the latent stage, if the wound be large and the convalescence protracted. Attention should be paid to the red blood count and hemoglobin, to the diet and vitamins, and, if the healing process is slow, possible distant foci of infection should be sought for.

Dressings should be carried out as aseptically as possible and especial care should be taken to protect the newly formed granulation tissue. Billroth, by dog experiment, illustrated the importance of granulation tissue as a barrier to infection. A culture of pathogenic bacteria was daubed over the granulating wound in one dog with little outward effect. This was repeated in another dog whose granulations had been scraped and traumatized. A fatal infection and septicemia resulted. If, then, granulation tissue is so important to the healing wound, it should not be traumatized either by rough manipulation or by irritating antiseptics. Care, also, should be taken not to tear away the delicate new epithelium where it sticks to the dressing. Dry sterile gauze, vaseline gauze, sterile saline dressings, Balsam

Peru, Ichthyol, cod liver oil, merthiolate, Azochloramid, all are useful dressings, but none have any outstanding virtue. Salle and Lazarus, Smelo and others have shown by tissue cultures inoculated with living bacteria, that the weakest dilution of all present-day antiseptics, except, perhaps, iodine, effective against bacteria, is still strong enough to injure living cells.

After the granulating wound has become very clean and the bacterial count low, healing can be hastened by skin graft and in a few selected cases by secondary closure by suture.

Two practical examples will illustrate some of the above points:

1. E. M. 20650. A 40-year-old white housewife with mild diabetes underwent a Caesarean Section 12-27-38. Postoperative infection developed in the wound and pus burrowed to form a pocket superficial to fascia in right lower quadrant. The patient was placed on Dakin's irrigations and packs and after a time a small incision was made for counter-drainage of the right lower quadrant pocket. The patient was discharged with still a bit of drainage from both midline and right lower quadrant wounds. She was readmitted 4-9-39, three months later, because of persistently draining sinus in right lower quadrant and non-healed original midline incision. No communication was found between the right lower quadrant sinus and the original wound. Culture, as before, was streptococcus hemolyticus and staphylococcus aureus. The right lower quadrant sinus and pocket were now laid open by a 4" incision dependently placed in the groin. In six weeks time the patient was discharged with both wounds practically healed. This illustrates the necessity of healing by adequate drainage and the inadequacy of antiseptics alone where drainage is poor. It is also noteworthy how quickly the original midline incision healed after the right lower quadrant pocket was properly evacuated.

2. G. C. 47005. 43-year-old unemployed white man with positive Kahn was admitted 4-27-39 for incision and drainage of an extensive deep abscess of right forearm of undetermined origin but showing streptococcus hemolyticus on culture. Considerable hemorrhage at time of incision and drainage necessitated packing with sterile gauze. Although the wound seemed to be clearing up well, it was still deep and large, extending down to the

periosteum on the volar aspect of the radius, a month later. Daily dressings of Azochloramid had been applied. It was found on careful examination at this time, that in the depths of the wound was embedded a quantity of inspissated blood clot, acting as a chalk-like foreign body. This was removed and almost overnight the cleft granulated in and the patient was discharged with a shallow, clean granulated wound. The cause of delayed healing here is quite obvious, as is also the fact that the patient's serological syphilis did not prevent healing once the foreign body was removed.

The role of antiseptics in wound healing:

That there are so many antiseptics on the market testifies to the widespread faith in antiseptics as safeguards against infection and as stimulants of healing. We believe with Cole and Elman that it is good practice to apply an antiseptic—it matters little which one—to minor cuts and abrasions if they are seen within an hour or two of injury; likewise that these antiseptics serve a useful role as part of the routine preoperative skin preparation. But we are thoroughly opposed to the use of these strong antiseptics, prophylactically or otherwise in larger open wounds and compound fractures. The destruction of tissue they cause outweighs any bactericidal effect they may have.

The real controversy arises between those who believe that such mild vulneraries as Azochloramid, Merthiolate, Dakin's, Dichloramine T, etc., actually stimulate or hasten the healing of the infected wound and those who feel that they have no advantage over sterile saline packs, cod liver oil, or any other inert or bland substance. For reasons that we shall presently give, we feel that the agent used as dressing makes little difference so long as the larger principles, outlined above, are observed.

It is recognized that it is impossible to sterilize an open wound. An antiseptic, as Salle and Lazarus showed, in order to be effective against bacteria, must also of necessity, destroy the living cells of the host. Alexis Carrel teaches that the rate of healing of a surgically clean wound varies as to its size. That is, a large wound heals relatively faster than a small one and will tend to catch up to it in healing. This rate of healing is so constant, as to be predictable by mathematical formula. Although a gross intercurrent wound in-

fection might account for a plateau in the downward curve of healing, no mention was made of hastening the process by antiseptics or ointments.

D. P. Anderson, by accurate volumetric and bacterial counts in a series of infected wounds, studied the effect of a number of antiseptics upon their progress. His work agreed with Carrel's in that once all slough, foreign material and pus pockets are removed and a wound becomes surgically clean, it follows a predictable curve of healing regardless of type of dressing or antiseptic. Such antiseptics as iodoform and Azochloramid lowered the bacterial count in his surgically clean wounds, but did not thereby increase the rate of healing. In fact, in one representative case charted, when dressings were switched from Azochloramid to simple saline, the rate of healing actually increased, although there was also a sharp rise in bacterial count.

Smelo studied the effect upon a series of granulating wounds of several agents including sterile saline, cod liver oil, merthiolate, etc., employing each agent in turn for several days. No one of these agents showed any significant superiority to any other and the wounds pursued a curve of healing similar to those of Carrel and Anderson, regardless of type of dressing.

This past winter on the surgical wards at the Louisville City Hospital, we investigated the effect of the new antiseptic, Azochloramid, on infected wounds. This chlorine compound, N. N. dichloroazodicarbonamide releases its chlorine slowly over a prolonged period when in contact with the tissues and hence, theoretically at least, has the advantage over Dakin's (which rapidly gives up its chlorine) in that fewer dressings are needed, it is effective over a longer period of time, and is less irritating to the skin. R. H. Kennedy, Forest Young, and others had written favorably concerning Azochloramid, so we were decidedly prejudiced in its favor. Approximately twenty cases of infected soft-tissue wounds of all kinds were treated with the new vulnerary and an equal and roughly comparable group used as controls were dressed with our old standby, Dakin's solution and in a few cases with sterile saline and cod liver oil.

Accurate comparison was, of course, impossible, but results were rated according to three criteria, clinical appraisal by internes and author, days required to reach surgical cleanness, and number of days

until patient could be discharged to the out-patient department.

As the study progressed our enthusiasm for Azochloramid cooled, and at final reckoning its results were not significantly better or worse than those obtained by Dakin's. It produced, furthermore, a skin irritation in the majority of cases treated for any length of time, a thing which our mild Dakin's solution did not do.

Along with this study we produced in several rabbits, large chronic staphylococcal ulcers, one on either side of the back. One side was treated with Dakin's solution, the other with Azochloramid. Healing on the Dakin's side was just as fast and tissue irritation was less.

In conclusion, then, the problem of the infected wound is in the earliest and acute stage, elevation, immobilization and moist heat; in the latent stage, one of aseptic dressings, the removal of slough and provision of adequate drainage and in the granulating stage, the protection of granulation tissue, asepsis, and removal of any remote causes of delayed healing. The role of antiseptics is decidedly secondary to the "soap and water" mechanical cleanliness above outlined.

THE TREATMENT OF CARBUNCLES*

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A carbuncle is a more or less circumscribed inflammatory area involving the deeper layer of the true skin and subcutaneous tissue down to the fascia. It is characterized by fibrinous exudation, multiple foci of necrosis, and the tissue adjacent to each necrotic plug becoming gangrenous.

PATHOLOGY

The bacterial invasion is by the staphylococcus pyogenes aureus and streptococcus, which gain access to the tissues through the hair follicles and spread to the deeper structures by first involving the columns of fatty tissue connected to the follicles. Each fatty column contains a sweat gland, products of infection in one of these columns, trying to gain an outlet and not being able to escape to the sides, naturally go the way of least resistance, which is downward. Infection spreads as necrosis, breaking down the sides of

the columns, opens inter-spaces, thereby allowing other fatty columns to become involved, the products finding their way to the surface through these, until many openings are the result. Necrosis continually going on causes small openings to coalesce until larger ones are present, each filled with pus and necrotic tissue giving the condition the honeycomb appearance. The fatty tissue, being less resistant than the skin, becomes involved more rapidly, causing the undermined edges observed in these cases.

While this process is progressing beneath the surface, further infection takes place on the surface, as more hair follicles become infected by the secretions from the first, hence the two conditions, going on simultaneously, cause one of the most rapid and, in many instances, the most dangerous types of infection the surgeon is called to treat.

Many of these patients owe their condition to the lowered local resistance due to diabetes, and in some to Bright's disease. Many of these patients are among those well up in years, which further lowers their general resistance.

Superficial necrosis occurs relatively early because the spreading deep phlegmon soon cuts off the blood supply to the fat, superficial fascia and skin. Thrombophlebitis is frequent and is one of the reasons why rapid spreading takes place to surrounding structures. Where the foci of infection are about the neck or face, as they commonly are, septic clots in the facial, jugular, or ophthalmic veins, or in the cerebral sinuses, are not uncommon, and should always call for a guarded prognosis. Carbuncles about the face give a 50 per cent mortality. Metastatic involvement may also occur in richly supplied lymphatic fields, causing abscesses in the lung, etc., depending on the location of the carbuncle.

LOCATION

In 125 cases the distribution was as follows:

1. Left shoulder	1 case
2. Back below level tip of shoulders...	8 cases
3. Chin	2 cases
4. Abdominal wall	2 cases
5. Upper lip, including nose and face...	10 cases
6. Forearm	3 cases
7. Arm	10 cases
8. Scalp	2 cases

Total38 cases

*Read before the Jefferson County Medical Society, June 19, 1939.

All the others were located on the back of neck, with one-fourth in women and the rest in men. Since women began shaving their necks the number of infections of the carbuncle type has steadily increased.

SYMPTOMS

Marked constitutional symptoms are present from the start. In many, one or more chills will occur during the twenty-four-hour period, and septic fever is always present, and in many marked delirium.

Such marked symptoms, together with the hard indurated area surrounding the primary focus, with its purplish color, should enable us to make a diagnosis of carbuncle, and not the more simple type of local infection known as boil or furuncle. If the case is seen early, and close observations are made, delays will not so often take place in instituting active treatment, for here active treatment is the only hope for relief.

PROGNOSIS

Since using electrocoagulation only two deaths have occurred, one of the upper lip where electrocoagulation was impossible, the other was the case involving the abdominal wall, which was in a diabetic and far advanced when brought to hospital.

Under the head of surgical interference first came incisions followed by swabbing with pure carbolic acid, or by Harrington's solution (commercial alcohol, 94 per cent 640 c.c., hydrochloric acid, 60 c.c., water 300 c.c., mercury bichloride, 0.8 gm.). Realizing this was not efficient, the crucial incisions came into use, followed by the above solutions.

METHODS OF TREATMENT

Nowhere in surgery is delay fraught with more danger than in cases of carbuncle. Patients should be under the constant observation of the physician and seen at least daily; and cases showing early extensive tissue involvement and those with facial involvement should, if possible, be placed in a hospital at once. If the constitutional symptoms are not alarming, local and general treatment may be tried. If fever is high and frequent chills are present, with marked septic symptoms showing, no time should be lost in temporizing measures. The longer the delay, the greater the necrotic area; the more septic the patient, the higher the

mortality. Generally speaking, the writer does not believe it good surgery to wait to see if the condition will localize. It requires too long and the results are far too uncertain to wait on vaccines, poultices, and topical applications.

Should the patient be unwilling to have active treatment instituted, he and the family should be made to clearly understand the risk they are taking, and the more extensive destruction of structures required to obtain relief should natural efforts fail. They should also understand conditions may quickly arise that entirely preclude further efforts to save life. Time taken to explain fully these points to those interested in the patient will, as a rule, obtain for the surgeon the consent to do as he thinks best.

If the consent cannot be had to interfere in the case actively, then ultra-violet, water cooled lamp treatments, together with such hot antiseptic fomentations as have best met the indications may be tried. Here vaccines at times do good. Sodium citrate should be used internally, in 10-grain doses, 3 times a day. Sulfanilamide being the new addition to aid in strep attacks.

Notwithstanding the criticism the writer believes good results are often obtained by the use of Edwenil 1 to 2 c.c. each day. Whether we use a crucial incision or whether the case is one opposed to any form of surgery, or where the upper lip is involved and surgery cannot be done, the dead tissue removal can be hastened by some agent to digest away rapidly the slough. Brewers yeast is splendid for this, so also is some form of pepsin, either in powder, or solution, or **enzymol**.

Under the old plan of treatment by cutting operations, which at best were not only bloody but followed by severe shock and in many cases death, patients were not to be altogether blamed for taking the chance of expectant plans of treatment. In many instances their chances were about as good as with surgery.

It was this observation that caused the writer to seek more rapid and less dangerous methods in the treatment of these desperate cases. The first departure from the knife was in the use of the cautery, either in the form of the cautery knife, or the heavy cautery, the former being the most satisfactory. This treatment gave rise to many disappointments, the

cautery frequently being cold when most needed; cooling rapidly when being used; and, on the whole, far from meeting the demands for a satisfactory method of dealing with this type of case.

Having had extensive experience with the D'Arsonval bi-terminal current in the treatment of cancer cases, its use in carbuncles naturally suggested itself. The work could be done without anesthesia in the early cases, save hyoscine, morphine and cactin; there was no cutting operation, hence no bleeding to staunch, no shock, and a shorter stay in the hospital. The further advantages were: No hot cauteries to handle, or to cool down while in use, the heat and destruction of tissue being entirely under the control of the operator at all times. Any amount of tissue destruction could be had, depending on the amount of current used and the length of time of its application.

When it is definitely determined that a carbuncle is present, it is the proper time to institute radical measures for its immediate relief. Like acute appendicitis, the time to operate is when the patient is first seen, as the work will be less then and the patient's chances better than at any later period.

TECHNIQUE OF ELECTROCOAGULATION

The writer has found the conventional type of high frequency machine better suited for electrocoagulation than the modern tube type machine as sold today, for the reason the conventional type, which is constructed with condensers and spark gaps, give a damped current of much greater heat quality, than do tubes which give an undamped current. The absence of heat, is the reason undamped currents are used for cutting. Electrocoagulation has for its purpose the destruction of tissue.

The technic is as follows: Assuming that, for some reason or reasons, the patient should not, or will not, take either a local or general anesthetic, and the amount of tissue destruction is not too great, the area involved can be anesthetized by using the same type of current as will be used in operating. Attach the dispersing electrode of the high-frequency to any part of the patient's body that is most convenient; or, what is a very good method, use the autocondensation handle and attach one cord from the machine to this and tell the patient to grasp it with both hands, not so tightly as to cramp the hands, but firmly. This will give the pa-

tient something to do with his hands and prevent his taking hold of you, and is an easy way to make the desired connection.

To the other cord of the machine is attached the handle of the active electrode which is to be used with the needle point in destroying the pathology. Start with a very light current, just enough to make the so-called "feather spark"—allowing this to come in contact with the skin about one-fourth inch or little more from the margin of the area to be destroyed. By passing this in a circular manner around the carbuncle for three to five minutes and having your assistant gradually increase the spark up to the point of tolerance, and at the same time increasing the speed of revolutions, the entire area will be numbed, and, without telling the patient, the needle is pushed into the infected tissue as deep as is necessary to reach the deepest points of infection and allowed to remain there, increasing the current if needed until the tissue is blanched white. The amount of current will usually be about 250 to 500 milliamperes and the time 20 to 30 seconds.

When the tissue becomes white, the needle is removed and inserted into another adjoining area and the current applied by the foot switch until the tissue is again blanched. By repeating this procedure, the entire pathology can, in a few minutes, be entirely destroyed and only healthy tissue remain. When all infected tissue is coagulated, the major portion can be removed at once with a large spoon curette, leaving only a healthy base, and the overhanging skin trimmed away with scissors. Any bleeding points are controlled by allowing the current to arc for half-inch spark distance, when all bleeding will instantly stop. The wound is now clean and ready to be dressed with plain sterile gauze. Pain will not be experienced after the treatment is over, for the reason that small terminal nerve endings are obtunded by the current.

SEVERE CASES

If much destruction is going to be needed, the patient should be in a hospital and given a full strength hyoscine, morphine and cactin tablet two and one-half hours before the time of the expected operation. This should be further augmented by the half strength tablet of the same, one-half hour preceding the operation.

The patients usually come to the operating table either in profound sleep or

if not, in that state of "twilight sleep" where they can converse with you, while experiencing no pain, nor remembering anything that happened at the time.

Where an ether anesthesia is used, great care must be exercised to prevent explosion by getting the ether can at safe distance before the treatment is begun. If the operation is about the face or neck, time must be allowed to get the ether vapor out of the patient's lungs and, as a further precaution, lay a wet towel or several layers of wet gauze over patient's face during the time the current is on. The operator can control any of these dangers, if experienced in the use of the current, by not allowing any sparking to occur on the surface. This is done by keeping the needle in the tissue during the entire time the current is on, and by keeping the needle clean and free from charred accumulations at the tip that is exposed for the first inch or two for contact. No sparking can occur from the portion of needle that is covered by the rubber tubing and away from the tissues.

These cases, being more extensive, will require from 750 to 1,250 milliamperes of current to work fast and avoid any hemorrhage, and should have the dispersing electrode applied to some portion of the body, either the thigh, back or abdomen.

This dispersing electrode should be of block tin, 6 by 8 inches in dimensions, and must always have round corners. It should be in direct contact with the skin and should be thoroughly soaped or applied over a towel of several thicknesses which has been wet with normal saline solution to make a perfect contact, and should be maintained in direct contact either by an assistant holding it firmly against the skin, or bandages, or sandbags may be used to maintain the contact. Perfect contact must be kept up at all times, else a burn will be produced by the current arcing across from the tin plate when the current is on. The operator should always use a foot switch so that he may be in perfect control of the current. This insures instant application and likewise instant breaking of the contact when necessary.

The machine should be grounded to a cold water-pipe to take care of any stray currents. Remember, you are using a current of potential danger, both in volts and milliamperes.

If the slough that is going to occur pro-

duces much odor, this can easily be cared for by the application of powdered sugar to the wound. The sugar should be moistened enough to form a paste and spread on gauze large enough to cover the wound. The paste should be spread on sufficiently thick to make a smooth dressing when applied, and placed in direct contact with the wound. This dressing can be used exclusively if desired, or an oil dressing can be substituted when the wound has become perfectly clean and free from odor. The separation of the slough can be hastened by the use of pepsin which will rapidly digest out all tissue destroyed by the current, leaving a clean, granulating wound.

The electrocoagulation of these conditions is not only more rapid but much safer than surgical removal, there being no bleeding to annoy or cause shock. It seals all lymphatics, thereby preventing any further danger from metastasis; is painless after the work is done; has no mortality from shock of operation and leaves a smaller and more pliable scar. The scar can further be lessened and the healing process made more rapid by the use of the water-cooled ultra-violet lamp two minutes each day, with open lamp at six-inch distance. The use of peroxide to cleanse the wound will not only favor the cleansing process, but will act as a photosensitive agent enhancing the therapeutic action of the lamp.

A word of caution should be given in those cases where local anesthesia is used. Remember tissues infiltrated with fluid generate heat much more rapidly than normal tissues. At least one-third less current, and time must be used, or else, by the generation of steam, a much wider destruction will take place than was intended.

Electrocoagulation in carbuncles so far surpasses the old treatment of knife or cautery as to make them obsolete.

DISCUSSION

S. A. Overstreet: I know very little about carbuncles and their treatment but I was interested in a report at the American College of Physicians in New Orleans by Randolph Lyon regarding his treatment by massive doses of vaccine. In two hundred cases there was one fatality and this not directly related to the carbuncle or its therapy. Treatment consist of the use of .5 cc. of staphylococcus vaccine (Parke, Davis) and on each 12-hour interval

using 1 cc. injection of the vaccine. He presented a very convincing series with no particular explanation why it was successful. I have had occasion to use it on two cases since then, and certainly it compares very favorably in results with what surgery I have seen.

George A. Hendon: In looking up the literature on this subject I was chiefly impressed by the meagerness of its proportion, and I am very much in hope that this paper will supply this deficiency. It seems that authors are satisfied with a mere allusion, that the men who write books don't have carbuncles.

The most unique thing about carbuncle is that the two main factors are etiology and therapy; that they are apparently more important than the pathology and clinical history and the symptomatology. There is no doubt that the line of treatment indicated by Dr. Willmoth holds a superior position. It is the most complete type of treatment with which I am acquainted. However, it would behoove most of us to select some simpler plan to use in emergency. This type of treatment involves a special knowledge and special equipment and careful attention to details. We are able sometimes to get equally as good results, although not as quickly nor as surely, by mass removal,—by incising through the normal tissue surrounding the carbuncle then lifting it bodily from its base.

Another very important treatment is the injection of hydrochloric acid beneath the fascial bed of the carbuncle. But before going in with a needle under the carbuncle an injection of novocaine should precede the acid. Some carbuncles will wither and die under this form of treatment.

In the case of tendency toward spreading, "Block houses" can be established by injecting HCl in the normal tissue at strategic intervals around the carbuncles. After the carbuncle is removed the future treatment is more or less obvious and can be easily applied. But for quick and certain and sure action with least damage to the patient I can only recommend the procedure proposed by Dr. Willmoth.

A. D. Willmoth (in closing): In the cases involving the lip, you can't take off the entire upper lip. You have to treat them expectantly. Use the vaccines, and Edwenil (I have seen cases where these seemed to do good), also sulfanilamide. Those are expectant treatments and can and must be used. Most of the cases I showed are small. Most are not extensive. In those with the back of the neck involved I would not want to use expectant treatment. In those, the quicker you remove from the body the infectoin, the better chance the patient has of recovery. As treatment is better done by some method that prevents absorption into the blood stream,

heat the tissue until you prevent the spread. In my own work, I have had much better success with electrocoagulation than with cautery or removing with the knife, or medicinal. There are cases in which vaccines play a part—where they won't allow you to do anything surgical. As for treatment with hydrochloric acid that Dr. Hendon mentioned, I have had no experience with it. I have had experience in the mass removal. All of us have had that in years gone by.

SOME OF THE NEWER DRUGS AND THEIR USES*

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How many times have we heard the expression, "keeping up with medicine." This is truly what every reputable physician strives to do. Each year sees a new array of drugs, singly or in combination, under various names paraded before us. Some are good and some are not so good. However, at rare intervals, the sun breaks through the clouds of many long and weary days of clinical research and we are thereby enriched by something new by which we may aid humanity. It is not my intention to weary you with a long list of recent drugs, but to bring to your attention only a few of the preparations which are practicable.

There has recently been advanced a new drug, sodium diphenyl hydantoinate (Dilantin, P. D. & Co.), for the treatment of epilepsy. It is more anticonvulsive than phenobarbital and is well tolerated in single massive doses, or small doses repeated over a long period of time. It is more effective in the grand mal seizures, yet aids almost as well in the petite mal type. Tolerance to this drug varies and toxicity follows two types. There may be a mild reaction consisting of dizziness, slight nausea, tremors, ataxia, and disordered vision. The more severe reaction consists of a dermatitis or purpura. To effectively control epileptic seizures in adults, the dosage should be between 0.2 and 0.6 gm. daily. Start with 0.1 gm. doses before meals daily and increase at intervals of 7 days if necessary.

An old drug given in a new way is Congo Red (1 per cent red in 5 per cent dextrose solution, boiled 5 minutes and filtered). It acts as an antitoxin for the toxins of diphtheria and curane-

*Read before the Hardin County Medical Society.

mic, antihemolytic, anticoagulant, and hemostatic.

Hexamethylenamine teraiodide, or Simomine (Pitman-Moore) is especially indicated in all tertiary lesions of syphilis. Its sponsors claim that a maximum iodide therapy is obtained with a minimum amount of the drug. It is well tolerated and rarely causes gastric distress or nausea in effective dosage and can be given over fairly long periods. The dose is 1 or 2 grains in a capsule 3 or 4 times a day.

One drug not quite so new perhaps, yet which has within the last few years come into use quite extensively, is Ma-Huang or Ephedrine, which is obtained from a shrub growing in the northeastern part of China. Experiments have recently been made to produce it synthetically on a commercial scale. When administered by mouth it contracts vascular tissues, increases blood pressure, relaxes bronchial spasm, and acts on the sympathetic nervous system as an excitant. As a nasal spray it reduces the congested mucous membrane of the nasal cavity promoting normal breathing. It can be given in capsules or tablets, or combined with an ointment, jelly, or cough syrup. The usual dose in capsule or tablets 3-8 gr. repeated every 4 hours when necessary. In asthma, for a sedative action, may be added 1-2 gr. phenobarbitol.

In recent years two new chemotherapeutic agents have been used in the treatment of infections of the urinary tract, namely, Mandelic Acid and Sulfanilamide.

The use of the ketogenic diet, one which produces in the body under normal conditions ketone bodies or acidosis, made a great advance in the treatment of diseases of the urinary tract. It was found that the effective factor produced by the above diet was due to Beta hydroxybutyric acid, but which when given orally is rapidly oxidized. It was then found that Mandelic Acid when taken by mouth was excreted unaltered in the urine. To be bacteriostatic and bactericidal to many kinds of bacteria, the urinary concentration should be at least 0.25% to 1%. For effect the pH of the urine should be below 5.5. Infections due to cocci, as a rule, are not benefited by the drug. It is usually prescribed as ammonium mandelate in the form of the syrup or elixir. For satisfactory results 12 gms. of the pure acid is the daily requirement. At the end of 10 days discontinue the drug and repeat

course of treatment at the end of another 10 days, if necessary.

Sulfanilamide, para - amino - benzene-sulfonamide, has recently been in the trial stage and is now available for use. It was originally introduced for the treatment of hemolytic streptococcic infections. Other streptococcic infections in which its use has been favorably reported include erysipelas, septic sore throat, puerperal fever, otitis media, scarlet fever, mastoiditis, acute undulant fever, and others. In infections of the bladder, best results are obtained when B. Coli and the streptococci are found. No improvement is produced when B. Proteus, Friedlander's Bacillus, or Bacillus Pyocyaneus are found. Great claims were made for it and it was reported to be the "sine qua non" in the treatment of gonorrhea. However that may be, I have found that it is a useful adjunct in the treatment of gonorrhea but that in addition for obtaining curative results in a large number of cases, we must rely on our previous time-honored routine. I have also seen this drug used in a case of epidemic cerebro-spinal meningitis with recovery of patient. The drug is marketed in 5-grain tablets and the dosage recommended is to give 60 grs. daily for three days, then 40 grs. for the next two days, and 30 to 40 grains daily for a total period of 10 to 14 days, at which time medication is stopped. No sulphates of any kind should be given while the patient is under treatment with sulfanilamide. Some patients may exhibit signs of toxemia, namely, cyanosis, nausea, headache, or drowsiness. The most serious complication to guard against, according to the latest reports, are sulfhemoglobinemia, agranulocytosis, methemoglobinemia, and hemolytic anemia. The addition of sodium bicarbonate with each dose will tend to lessen or prevent toxicity of the drug.

A very important technic which has become available, is the Neufeld method of type diagnosis making specific serum therapy practicable in the treatment of pneumonia. It is possible at the present time to purchase a small case containing pneumococcus typing sera and the country physician can do his own typing, resulting in an earlier administration of the correct serum for each specific type. It has been my privilege to use and also to observe the administration of serum to a fairly large number of pneumonia cases and in all of

those, in which it was used early in the disease, the results have been little short of miraculous. In regards to the dosage, some advise big doses early and stop; others advise giving smaller doses at 6 to 8 hour intervals. All cases observed by me were treated by the latter method.

Allantoin, a substance found to be the effective principle in the excretion of maggots, is now used as a cell proliferant and stimulant to healing in indolent ulcers, chronic osteomyelitis, and slow healing wounds. It is effective in 0.2% to 0.4% solutions freshly made. Saturate gauze and apply direct to lesion.

Scraped apple has recently been placed on the market under a variety of trade names for the treatment of diarrhea, especially in infants.

Insulin shock has produced a large number of cures in cases of schizophrenia.

Although an old drug, sulphur has been advocated, recently, for the treatment of arthritis. It is put up for intramuscular use, and its advocates report striking results.

Copper is now on the market in numerous different new preparations for the treatment of anemia.

Ergotamine tartrate 1-2 mg. will often stop a migraine headache.

In women, a very obscure condition, menstrual migraine, may be alleviated by the use of Follutein.

Nicotinic acid is used in the treatment of pellagra. The dosage is to inject 50 to 100 mg. intramuscularly or intravenously per day.

Hydrated Magnesium Trisilicate has lately been used in the treatment of gastric hyperacidity and gastric ulcer. The dosage is 22 gr. three times a day, preferably between meals and at bedtime.

Testosterone propionate, a new synthetic male sex hormone, is claimed to give some relief in the first stages of prostatic hypertrophy. It is put up in ampules of 5 mg. each, equal to 250 units, and the dosage is as follows: for the first four to six days, one ampule a day intramuscularly; thereafter, one ampule every 3 or 4 days for a prolonged and indefinite period.

Aldarsone, the formaldehyde sulfoxylate of 3-amino-4-hydroxy-phenylaminic acid, is now in the experimental stage for neurosyphilis. The initial dose is 0.25 gm. intravenously. Second week 0.5 gm. Third

week 1.0 gm. At which level the dosage is kept unless contraindications arise.

Trasentin, hydrochloride of diphenylacetyl-diethylamino-ethanol, is a new antispasmodic which is claimed to be free from the side effects associated with atropine. It acts especially on smooth muscle pain but is not satisfactory when used for pain associated with inflammatory processes instead of spasm. Hiccough has also yielded to its use in a very satisfactory manner.

A new drug in the experimental stage for glycosuria is obtained from devil's club (*Fatsia Horrida*), a shrub growing along the coast of British Columbia. It is necessary to do much more extensive research work on the drug before its exact status can be determined.

A new method was advanced this year for the treatment of typhoid fever. 1 c.c. of typhoid bacteriophage is injected intravenously, the patient being cured by crisis. It is claimed that the patient is free from fever and feels perfectly well at the end of 48 hours. In some cases it was necessary to give a second dose.

Manganese butyrate has been recently advocated for staphylococcus infections, such as furunculosis, carbuncles, chronic ulcers and abscesses, and pustular acne. The dose is 1% solutions in 1 c.c. ampules intramuscularly.

Sucrose is used to reduce intracranial tension and as a diuretic. The dose is 50 gm. intravenously.

Atabrine has recently been used in the treatment of malaria. It is claimed that parasites are eradicated and the disease cured more rapidly than with quinine, and that relapses are less frequent. The dose is 0.3 gms. of atabrine daily for five days.

Amino - dimethyl - pyrazolon - quinaline - sulphonate, under the name of Causalin, has been advanced for the treatment of chronic non-specific arthritis. The average daily dose for an adult is 45 grains per day.

Kapseals Desicol (Parke-Davis) represents desiccated whole bile in a readily soluble form. It is used wherever the effects of bile are desired and is especially advocated in conditions following surgery of the biliary system. It comes in gelatin capsules, each containing 0.325 gms. or 5 grains. The dose is two or more kapseals two or more times daily, after meals.

In the field of nutrition great strides

have been made in recent work upon vitamins. It is claimed that massive doses of Vitamin D are of value in treating arthritis, resulting in prompt disappearance of joint pain, increased mobility, decreased peri-articular oedema, and induration. Recent reports state that the daily administration of 1 to 3 gms. of Vitamin C (ascorbic or cevitamic acid) assists in combating insomnia and produces a restful and apparently normal sleep. A lack of Vitamin A produces a dry skin similar to the "goose flesh" type, hyperkeratosis of hair follicles, xerophthalmia and night blindness. The average daily dose of Vitamin A for a normal person should be 6,000-8,000 U. S. P. units.

Thiamin Chloride, a synthetic brand of Vitamin B, is used to promote normal growth, prevent or cure polyneuritis, neuritis of pregnancy, and certain disorders of the gastro-intestinal and cardio-vascular systems. X-ray sickness may be prevented by this preparation. The dosage is 10 mg. or more daily by mouth, or 1 mg. to 10 mg. by intramuscular or intravenous injections daily.

An old drug put to a new use is the tuberculin paper test for tuberculosis. Small pieces of filter paper are moistened with tuberculin and then dried. It is then placed over the flexor surface of the forearm and read at the end of 48 hours. A slight redness, swelling or papular eruption, indicates a weak positive. Marked redness and swelling, a moderate positive. A strong positive has, in addition to the above, the formation of blisters.

It has been claimed that Esidrone (Ciba), the sodium salt of pyridine-dicarboxy-mercuri-hydroxypropylamide - theophylline, is of benefit in cases of cardiac edema, dropsy, and ascites. The dose is 1 c.c. (containing 0.14 gm. Esidrone) intravenously or intramuscularly.

In a group of children exposed to measles, it was found that 90% were protected and that the remainder had very mild measles, when placental globulin was administered. The average dose is 4 c.c.

Pitressin is used to relieve spasms of smooth muscle. It is used especially in cases of ileus due to gaseous distention. The dose is 1 c.c. intramuscularly.

Ozone in olive oil is a bactericidal, fungicidal, and bacteriostatic compound. It is readily decomposed, liberating nascent oxygen. It has been used in cases of acute

coryza and marked results were claimed for it. The patient being freed from mucous plugs, the nasal airways cleared, and respiratory distress relieved. The dose is 5 to 10 drops instilled into each nostril with an ordinary medicine dropper several times per day.

So, on account of the multiplicity of drugs paraded before the medical profession, I am somewhat of the opinion of Bacon when he stated: "There is a wisdom in this beyond the rules of physic: a man's own observation, what he finds good of, and what he finds hurt of, is the best physic to preserve health;" but it is a safer conclusion to say, "This agreeth not well with me, therefore I will not continue it;" than this, "I find no offense of this, therefore I may use it;" for strength of nature in youth passeth over many excesses which are owing a man till his age.

THE ARMAMENTARIUM OF CARDIAC THERAPY*

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The past decade has witnessed rapid strides in the increase of our knowledge of heart disease. While preventative treatment has lagged, the armamentarium of active therapy has attempted to keep pace with improvement in diagnostic acumen. It is my purpose to discuss the indications and mode of administration of some of the drugs most useful in the treatment of heart disease. Digitalis and the digitalis-like drugs will not be included since everyone is acquainted with their use.

THE MERCURIAL DIURETICS

Of all the numerous drugs which can increase the output of urine in heart disease, the organic mercurial diuretics represented by mercupurin and salyrgan are the most potent and reliable. They are not effective orally, can be given intramuscularly but are best administered intravenously since mercury is very irritating to the tissues. Rectal suppositories are available. When the mercurial diuretics fail to relieve cardiac edema, the prognosis is very grave. The combination of theophylline with mercury is better than the purine-free mercurials such as salyrgan because sloughs and venous throm-

*Read before the Perry County Medical Society, June 12, 1939.

bosis occur with less frequency and severity. It is also less toxic and more active. Available combinations of mercury and theophylline are known as mercurpurin, esidrone and theophylline with salyrgan. Because mercury causes renal irritation, these drugs should not be given if many red blood cells are in the urine and most especially if there is serious renal insufficiency. One c.c. is first given intravenously and if no toxic effects are observed, 2 c.c. may be given the next day and repeated in from four to six days. Since diuresis begins within a few hours and begins to decline in twelve to eighteen hours, the mercurial had best be given in the morning so as not to disturb the patient too much during the night. They can be given for years without any danger. However, the sudden and rapid removal of fluid, in elderly cardiacs may produce temporary dehydration symptoms. The action of the mercurial diuretics may be enhanced by ammonium chloride, ammonium nitrate or potassium nitrate given several days before the mercurial is used. These salts are best administered in the form of enteric-coated pills containing $17\frac{1}{2}$ grains, and 90 to 150 grains a day are required. Since such large doses are objected to by many patients, and since the added diuretic effect does not counterbalance the annoyance to the patient, I have practically discarded their use.

The mercurials are very valuable in the early stages of heart failure when there may be no evident peripheral edema and dyspnea alone is the chief complaint. Their periodic use is also extremely valuable in preventing attacks of left ventricular failure.

Other diuretics for cardiac decompensation are:

1. Urea (average dose is 10 grams three times a day, after meals; given intermittently to avoid gastric distress; do not use when nitrogen retention is present.)

2. The xanthines (unreliable; must be given in large doses which cause gastric distress.)

3. Glucose or sucrose—50 per cent. (never effective when other diuretics fail).

4. Bismuth compounds (do not approach the mercurials in potency).

THE XANTHINES

The xanthines, represented by such drugs as theocalin, theobromine, aminophylline, are commonly used to treat hy-

pertension, angina pectoris and edema. These drugs have no permanent value as depressor agents, have very questionable value as a routine treatment for angina pectoris and are poor and unreliable diuretics in doses tolerated by the average stomach. If they are to be used, the cost to the patient should be considered. At the present time, theobromine with sodium acetate, $7\frac{1}{2}$ grains to the dose, is the least expensive of the xanthines. However, the intravenous administration of aminophylline is very valuable in relieving Cheyne-Stokes respiration. Very often one 10 c.c. ampoule which contains $3\frac{3}{4}$ grains will abolish the most distressing periodic respiration. In other cases repeated administration may be necessary. The intravenous form of this drug is also very valuable in treating and preventing attacks of paroxysmal dyspnea.

THE NITRITES

This group of drugs, the chief members of which are glyceryl trinitrate or nitroglycerin, amyl nitrite, sodium nitrite, and erythrol tetranitrate, are vasodilators and reduce blood pressure. However, the continued use of those which are slow acting such as sodium nitrite or erythrol tetranitrate is not as helpful in the treatment of high blood pressure as the pharmaceutical houses would have us believe. Nitroglycerin and amyl nitrite, however, can invariably be relied on to relieve an attack of angina pectoris. It is frequently stated that nitroglycerin can be used as a diagnostic test in angina pectoris but it is important to remember in this connection that the drug also may relieve the pain of gall-bladder colic which can simulate angina. Because amyl nitrite has an annoying odor, is difficult for self-administration, and much more expensive, I invariably recommend nitroglycerine. A tablet, 1-200 to 1-100 grain, is placed under the tongue for an attack. Relief is usually obtained in a few minutes. The toxic effects which some patients have when nitroglycerin is taken in the erect position quickly disappear on recumbency. Patients should be cautioned not to use more than two or three nitroglycerin tablets in an attempt to stop an individual attack. If three tablets at the most over half an hour are not effective, a coronary occlusion has probably occurred and in this condition, nitroglycerin is contraindicated. Since the duration of action is transient,

as many doses of the drug can be given in 24 hours as there are anginal attacks. When a patient has many attacks a day, it has been suggested that a very small dose, 1-400 or 1-500 grain, be taken every hour or two throughout the waking hours. This has not been very effective in my experience. Moreover, the patient soon tires of taking medicine so frequently. If a certain effort invariably produces an anginal attack, it can wisely be suggested that a tablet of nitroglycerin be taken just before that effort. Patients soon learn to do this of their own accord. Unfortunately some patients take advantage of this prophylactic value of the drug. For this reason I am very careful to whom nitroglycerin is prescribed.

QUINIDINE

Quinidine sulphate is very valuable in the prevention and treatment of the various cardiac irregularities. While it may not always be secure in its preventative action, it is usually effective in treatment. Much has been said of its harmful effects but in my experience in selected cases, there have been no dangers in its use. An occasional individual has symptoms of idiosyncrasy, such as deafness, tinnitus, diarrhoea, or nausea, and vomiting, but such disturbances quickly disappear on discontinuance of the drug. Since quinidine is rapidly absorbed and rapidly excreted, cumulative effects need not be feared. The chief contraindication to its use is in auricular fibrillation of more than six months' duration, in a patient with a history of heart failure for several months which has not responded to treatment or in a case of severe mitral stenosis. It should be cautiously used if the patient has a bundle branch block or complete heart block. It is my custom to prescribe on the first day several 3-5 grain doses of quinidine sulphate as a test for idiosyncrasy. Any idiosyncrasies are usually observed 2 to 4 hours after administration. If no untoward reactions occur the amount is gradually increased until after 2-3 days as much as 40-50 grains in 24 hours are administered. If auricular fibrillation or a paroxysmal tachycardia is being treated, the patient should preferably be in bed. Since the drug is rapidly excreted, each dose should be three to four hours apart. In urgent cases, the patient is awakened during the night. If, in cases of auricular fibrillation, regular sinus

rhythm is not restored within 7-10 days, the quinidine should be discontinued since further use will usually not be effective. In an occasional case of paroxysmal ventricular tachycardia, quinidine must be given intravenously. When congestive failure of recent onset complicates auricular fibrillation, full therapeutic doses of digitalis should be used prior to the administration of the quinidine. In auricular flutter, digitalis is first given to convert the flutter to auricular fibrillation and then quinidine to convert the fibrillation to regular sinus rhythm. Quinidine can be used if digitalis does not bring on fibrillation. If any of the cardiac irregularities are abolished by quinidine, then prescribe a maintenance dose which is 3-5 grains three times a day. This amount can be used indefinitely and may have prophylactic value in preventing recurrence of the irregularity. Because quinidine can experimentally prevent ventricular fibrillation which is probably the chief cause for sudden death in coronary disease, it has been recommended that it be given as a routine in angina pectoris and after recovery from a coronary occlusion. It is obviously difficult to determine its value in preventing sudden death, but I have seen no harm in its routine use in patients with coronary disease.

Remember that quinidine is not a substitute for digitalis but is merely a valuable addition to the physician's armamentarium for the treatment of the cardiac irregularities. Recently mecholyl (acetyl-beta-methyl-choline hydrochloride) has been recommended as a substitute for quinidine in the treatment of paroxysmal auricular tachycardia. This drug has very unpleasant side effects, is dangerous and should not be used until all other measures including quinidine have failed to restore regular sinus rhythm.

CONCLUSION

No attempt has been made to discuss all the drugs and measures available for the treatment of heart disease. Bed rest, morphine, sedatives, restriction of fluids and salt intake when congestive failure is present, purgation, weight reduction and many other agents are commonplace and need no emphasis. Moreover there are certain special therapeutic weapons such as paravertebral alcohol injections for the relief of angina, subtotal thyroidectomy

for hyperthyroid and neo-arsphenamine for syphilitic heart disease. The armamentarium of cardiac therapy is heavy and will be further strengthened if the pace of research and investigation is maintained.

HYDRONEPHROSIS*

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Rayer, a French surgeon in 1841, first coined the word "Hydronephrosis" and gave a description of the condition. Hydronephrosis is applied to the renal changes of pelvic dilatation and parenchymal atrophy, fostered by an obstruction in some part of the urinary tract. The dynamics of hydronephrosis are well understood but the symptoms are often lacking and some of us are disposed to disregard the kidney and direct our attention elsewhere.

I do not know of a single abnormal finding in the urine, which would lead one to suspect hydronephrosis except, possibly, a low specific gravity; in such a condition many factors would necessarily need be considered.

Cecil₁, 1920 and Nichols₂ (1937) each in a series of cases of hydronephrosis found that 30 per cent had undergone operations for other conditions, without relief of symptoms. Pathological lesions of the kidney, ureter, or bladder neck, were not suspected either before or after operations. Naturally, such errors may occur, when we consider the close association of the nerve supply of the kidney and abdominal viscera. It is the consensus of opinion, that the renal plexus receives its nerve impulse through the coeliac plexus, the source of supply to the abdominal viscera; consequently, the patient is not aware of his condition, until obstruction interferes with the outflow of urine sufficiently, to react upon the nervous mechanism of the renal pelvis.

MORBID ANATOMY. Hydronephrosis is a disease of the infant as well as the adult, and the contributing factor, may be the same in both. The morbid changes in the kidney and renal pelvis, vary according to the location and extent of the obstructive lesion. Strange as it may seem, obstruction at the uretero-pelvic junction produces primarily, a pelvic dilatation; while from obstruction low down in the tract changes to the renal tissue will

be more pronounced. The end results will be the same, when we consider back pressure and stasis as favorable for bacterial growth. Stones are prone to form and toxic absorption may ensue.

The pathological picture of the renal pelvis in hydronephrosis, is that of a dilated sac of varying degree; the wall becomes inelastic, the muscular structures being replaced with fibrous tissue. Frequently, in the process of dilatation, the uretero-pelvic junction is pulled upward, thereby contributing to complete obstruction. The renal changes are those of pressure necrosis, primarily at the papilla, with loss of tubular structures, producing a picture of "clubbing" as evidenced by the pyelogram. One must remember that with destruction of tubular structures whose function is to concentrate the urine by reabsorption of the liquid content, a low specific gravity of the urine may result.

ETIOLOGY, SYMPTOMATOLOGY: In considering the etiology, we feel that emphasis should be placed on the obstructive factors concerned in hydronephrosis as contributing to a narrowing of the lumen or loss of elasticity of the urinary channel, thus interfering with the flow of urine to the extent that morbid changes to the kidney and ureter will be manifest.

It should be remembered that any interference with the flow of urine from the kidney will cause a pyelectasis and a caliectasis, the extent of which will depend upon the degree and duration of the obstruction, the presence or absence of infection and related factors. This does not obtain when the obstruction is complete because when the pressure within the renal pelvis equals the arteriolar pressure, secretion ceases as proven by the experimental work done by Dr. Louis Frank₃ and others. These factors are presented under three main groups:

1. Intrinsic, or those in which the obstruction is directly associated primarily with the urinary tract,
- (2) Extrinsic, or those in which obstruction is present, but primarily not associated with the urinary tract, and
- (3) Neurogenic.

INTRINSIC CAUSES: In children, the most common predisposing factors responsible for hydronephrosis are congenital abnormalities about the bladder neck such as fibrosis with valve and bar formation. Usually in such abnormalities, both kidneys are affected with marked tortuosity of the ureters. Wesson₄, in an embryonal and physiological study,

*Read before the Jefferson County Medical Society, May 1, 1939.

came to the definite conclusion that the longitudinal muscle of the ureter was continuous with the trigone; the muscle structures so developed play an active role in urination in opening the internal sphincter, thereby producing a functional obstruction at the ureteral orifice, the result of hypertrophy of these muscles, a condition pointed out by Kretschmer and Hibbs, in a post mortem study, and also previously described by Young. Obstruction at the uretero-pelvic junction is at times observed as a result of anomalous vessels to the kidney, abnormal rotation, bifid pelvis, duplication of ureters, ectopy, ptosis, and horseshoe or fused varieties. The mere presence of an anomalous vessel to the kidney is of no definite significance unless it be shown to interfere with drainage. The vessel may not come in contact with the ureter or pelvis, but in some instances the ureter may be seen to pass over one of these vessels, accentuating an acute angulation, or, in case the ureter be attached high on the pelvis, such a vessel might compress the ureter against the pelvis. As stasis occurs and as the pelvis gradually enlarges, the ureter is compressed by lateral pressure from the distended pelvis and drainage is inhibited. Hence, one must conclude that in such cases of high insertion of the ureter into the renal pelvis, the relationship between the pelvis and ureter is the result and not the cause of the obstruction, obviously dependant drainage of the pelvis is lacking.

Fibrous bands, the result of periureteral inflammation, are encountered in which angulation of the upper portion of the ureter is present, and may completely block the outflow of urine. Renal ptosis may be of clinical significance when there is acute angulation of the ureter with stasis definitely demonstrated. The mechanism producing obstruction from other causes is not well understood.

To illustrate, the following cases will be presented:

Case 1: Congenital vesical neck obstruction: M. H. Female, age 2 (Kindly loaned by Dr. Owsley Grant). At age 18 months patient began to strain and cry when voiding. Clothes stained yellow. No pus or blood observed in urine. X-ray findings show small triangular dense shadow at the neck of bladder; diverging upward and out from shadow on both sides are two sausage shaped shadows extending up to the kidney.

Case 2: Obstruction at uretero-pelvic

junction (aberrant vessel). W. B., male age 25. (Referred by Dr. Ben A. Reid) History of intermittent attacks of discomfort in upper left abdominal and loin quadrant following the use of beer, each time of two to three days duration. Urine entirely normal. I. V. P. shows normal pelvis with evidence of hydronephrosis of the left. Retrograde reveals hydronephrosis of the left kidney the result of an aberrant vessel to the lower pole.

Case 3: Congenital abnormality; abnormal rotation (Ectopy): L. R. M., male age 38. (Referred by Dr. C. W. Chappell) History of attack of acute pain in lower right abdomen with muscular rigidity, nausea and vomiting. Urine shows pus, Pyelogram reveals normal left kidney but the right is that of an abnormal rotation and slight ptosis. The pelvis is enlarged with broadening of calices. The ureter is observed to enter the pelvis abruptly at lower and outer extremity, probably obstructed, the result of an anomalous vessel.

Case 4: Bifid pelvis: Mrs. H. Female, age 45. History of indigestion of several years duration not associated with foods. Gastrointestinal and Graham-Cole gall bladder function tests normal. Urine shows few pus cells and occasional clumps. I. V. P. shows bilateral bifid pelvis with hydronephrotic changes of superior pelvis of the left kidney.

Case 5: Ptosis: S. S., Female age 24. Chief complaint of pain in right lower abdomen. Mass palpated at head of coecum. Blood count and urinalysis normal. Retrograde pyelogram disclose marked ptosis with hydronephrotic changes.

Case 6: Horseshoe kidney: C. M., Male age 56. (Referred by Dr. Nodder) History of bladder irritation and pain in right back and loin. Urine shows few pus cells. I. V. P. disclose horseshoe kidney with hydronephrotic changes of right and left renal pelvis.

Infections of the renal pelvis, excluding tuberculosis lesions, are often referred to as causes of hydronephrosis; but its occurrence in some and not in others may be explained thus:—Some infections of the pelvis apparently remain superficial with only the mucosal lining involved; in others there is a submucosal infection in addition, with a resulting interference to the myogenic structures with inhibition of peristalsis. In tuberculous infections, ureteral stricture is the rule, and is the result of submucosal involvement with a characteristic "beading effect", a roentgen diagnostic sign of tuberculosis.

Case 1: Infection (non-tuberculous:) W.

C. H., male age 37. History of weakness, loss of weight, abdominal distress and cloudy urine of about a year's duration. Urine is cloudy, of low specific gravity, albumin two plus and loaded with pus cells and clumps of pus. I. V. P. discloses marked bilateral hydronephrosis, infected.

Case 2: Infection, tubercular: W. R. C., Female age 33. (Referred by Dr. D. M. Cox) Chief complaint: "Sticking sensation" left lower abdomen with occasional burning and frequency of urination. Pelvic examination reveals thick, indurated area about the left ureter at its juxta-vesical portion. Urine shows an occasional pus cell and many red blood cells. Retrograde pyelogram reveals left hydronephrosis, hydroureter with "beading effect" and conical appearance of the terminal ureter. Acid fast stain is positive for tuberculosis.

Calculus, primary or secondary to infection is rather frequent in hydronephrosis; whether stone is the cause or result is uncertain. We are aware that the ureteral variety is known definitely to produce obstruction with subsequent dilatation.

Case 1: Renal calcareous hydronephrosis: J. W. S., female age 42. (Referred by Dr. D. P. Hall) Chief complaint: Tumor or mass felt in left abdomen of two or three months duration. Urine cloudy and loaded with pus. Retrograde bilateral pyelogram shows marked bilateral calculus hydronephrosis with infection.

Case 2: Ureteral calculus, pyelectasis and caliectasis: A. J. P., male age 41. (Referred by Dr. E. H. Baker) Chief complaint: Low right abdominal pain with nausea and vomiting. Appendectomy six months previously (elsewhere) without relief of symptoms. Urine shows occasional pus and red blood cell. I. V. P. shows mild hydronephrosis and hydroureter with small calculus at the juxta-vesical orifice.

Tumors of the kidney, ureter, or bladder primary or secondary; vesical diverticulum and prostatic hypertrophy produce obstruction either by occlusion or traction with angulation of the ureter sufficiently to cause hydronephrosis.

Case 1: Renal Neoplasm: C. J. K., male age 45. (Referred by Dr. D. M. Embry) History of hematuria on one or two occasions. First noted three years ago; Last appearance which was two days ago has been continuous. Retrograde pyelogram reveals hydronephrosis with marked filling defect of the lower calyx, encroaching upon pelvis. Pathological report: Primary adenocarcinoma of renal and pelvic origin.

Case 2: Ureteral Neoplasm: P. J. K., female age 32. (Referred by Dr. Ben A. Reid) History of recurrent attacks of right sided abdominal pain for which operation for removal of appendix was advised on several occasions. Urine shows occasional blood, 1-2 pus and small clumps. I. V. P. reveals evidence of right hydronephrosis. Retrograde study shows hydronephrosis, upper hydroureter with conical obliteration lower down. Pathological report: Fibro-myoma with obliteration of the ureter, primary cause of hydronephrosis.

Case 3: Prostatic hypertrophy, obstructive: H. C. R., Male age 64 (Referred by V. E. Simpson). History of loss weight and weakness. Nausea and vomiting. Overflow retention of several months duration. Cystogram reveals prostatic hypertrophy, patent ureteral orifice on right with regurgitation of the contrast media to the kidney. The ureter is dilated, tortuous and presents a kinking below the uretero-pelvic junction. The pelvis is markedly dilated with destruction of the parenchyma.

Of the extrinsic causes, we are only concerned with carcinoma of the uterus, cervix, or rectum. Through metastasis or necrosis with subsequent fibrosis and, or, calcium deposit, direct invasion of the ureter or base of bladder has been observed. Abdominal and retroperitoneal tumors with pressure on the ureter or renal pelvis may result in varying degrees of pyelectasis and caliectasis. It has been reported though not definitely confirmed, that radiation therapy to the pelvic viscera may cause fibrosis with stricture formation in the pelvic ureter. Post mortem findings on a female white age 56. History (ante mortem) of progressive nausea, vomiting, gaseous distention, weakness and vaginal discharge of several months duration. Several urinalysis entirely normal. Vaginal examination disclosed marked necrosis of the cervix and anterior vaginal wall; pelvis, so-called frozen. Death 46 hours after first seen. P. M. findings: Adenocarcinoma of body of uterus and cervix with metastasis to anterior vaginal wall; base of bladder and right broad ligament, with marked calcification in the latter and about the ureter as it passes through the broad ligament. The proximal ureter and renal pelvis is markedly dilated and filled with purulent material.

Neurogenic. A logical explanation of the disease syndrome, megloureter, and hydronephrosis may be closely related to Hirschsprungs disease, a neuromuscular dysfunc-

tion or physiological obstruction to normal peristalsis in consequence of an overactivity of the sympathetic nerve impulse to the part. Quinby⁶ deduces that a nervous retardation of the normal flow of the ureteral peristalsis may be brought about by the constant pulsation of an artery against the ureter. It would seem that if such a pulsation against the ureter were the cause, we should see a deformity at the uretero-pelvic junction characteristic of an anomalous vessel. This we are unable to verify.

Case Report (Neurogenic): A. S. Female age 23. Chief complaint: Pain in abdomen, chills and fever. Urine contains a few pus cells and occasional clump. Retrograde cystogram reveals bilateral patent hydro-ureters, with definite kink at right uretero-pelvic junction. The pelvis on both the right and left are dilated. This condition is strongly suggestive of hydronephrosis, the result of a neuro-muscular dysfunction.

Mention has already been made of a normal urinalysis. Because of this fact, many instances of hydronephrosis will be overlooked, and, in the interim, irreparable damage to the kidney may occur before the patient will come under observation and proper treatment instituted. The physical findings may reveal the presence of a tumor in the region of the kidney in which our suspicions would lead to a diagnosis; however, as shown previously, the diagnosis is made primarily on the Roentgen ray findings, and it is here that I. V. Pyelography probably has its greatest field of usefulness. Great care, however, must be exercised in the interpretation of the film, and when in doubt, retrograde pyelograms must be made.

PROGNOSIS: Keen observation on the part of the clinician in recognizing renal changes in normal urinary findings is a factor far more responsible for a good prognosis than formerly. Failures in response to treatment is in direct proportion to the time and extent of damage to the kidney until finally a nephrectomy may be necessary.

TREATMENT: The treatment must depend on the contributing factor responsible. Obstruction about the bladder neck must be corrected either by dilatation of stricture; destruction of congenital valves, or prostatic hypertrophy transurethrally or by open operation. Obstruction due to stricture of the ureter at the vesical orifice requires repeated dilatations by means of the cystoscope, followed by pelvic lavage. Ureteral calculi must be removed either by manipulation of the stone, ureteral dilatation, indwelling

catheter, or ureterostomy. Strictures at the uretero-pelvic junction, in the presence of infection of necessity, need indwelling ureteral catheter with pelvic lavage before any surgical procedure, in the form of plastic repair of the pelvis. Division of aberrant vessels, reimplantation of the ureter into the pelvis, nephropexy, etc.

SUMMARY: Hydronephrosis is a definite entity in which there is frequently no physical or laboratory findings. Many cases present symptoms referable to the abdominal viscera. Marked changes to the kidney and renal pelvis are brought about over a long period of time as the result of partial obstruction to the outflow of urine and are situated in any part of the urinary tract. Complete obstruction does not cause hydronephrosis but renal atrophy. Neurogenic factors must be borne in mind when no definite obstructive lesion is demonstrated. The Roentgen ray should be a routine procedure in all cases who present vague or indefinite symptoms.

BIBLIOGRAPHY

1. Cecil: *Jou. A. M. A.* 75: 1239, 1920.
2. Nichols: *Jou. Urol.* vol. 37: 106, 1937.
3. Frank: *Trans. Sou. Surg. Gyn.* vol. XXIV: 28-47, 1912.
4. Wessen: *Jou. Urol.* vol. 4: 279, 1920.
5. Kretschmer & Hibbs: *S. G. O.* vol. 57: 170, 1933.
6. Quinby: *Jou. A. M. A.* 93: 1709, 1929.

DISCUSSION

Charles E. Gaupin: I have been asked to discuss this paper from the standpoint of the general practitioner. In a great many instances perhaps the general practitioner is the first to encounter these cases. The essayist has told us of the dire effects of this condition if failed to be diagnosed. The back pressure will cause atrophy of the tubules, resulting in damage of the kidney. Stone formation, infection, and as a last step, pyelonephritis, which is not only fatal to the future function of the kidney, but may result in loss of life itself.

Dr. Atherton said that diagnosis for the general practitioner is difficult, even though we rely on early diagnosis. The general practitioner can hardly go further than to make a provisional diagnosis of this condition. The reason is that the final steps in diagnosis have to be made by the roentgenologist and urologist together.

There are two types of hydronephrosis, the acute and the chronic. In the acute there is an attack of renal colic. This type is sudden and there is complete obstruction to the outlet of urine. If the urine is examined we will find nothing. After the urine trickles by, we find a few red blood cells in the urine. That is as far as the general practitioner can go. He realizes the case must go to the roentgenologist and the

urologist. It is not fitting for us to attempt to treat this individual.

NOW as to the chronic hydronephrosis. The condition represents a partial obstruction to the outlet of urine. It makes no difference whether there is gall bladder trouble, cracked breast, obstructed bowel, if we have obstruction to the normal outlet, sooner or later infection sets in. After infection sets in, diagnosis is less difficult than before this stage. As the essayist has mentioned, we don't find urinary changes that will help us. After infection sets in most of us will make a diagnosis of pyelitis. These cases should be followed up. If referred to the urologist, he will find some abnormality, such as stricture, in which case it is really the beginning of the hydronephrosis.

In making a diagnosis, the patient complains, perhaps in the beginning of hydronephrosis or when the obstruction is sufficiently intense to dilate the pelvis, of a dragging pain in the abdomen or side. On physical examination we may find nothing. It may be possible to elicit some deep tenderness. At this stage, the kidney structure has not enlarged. It is almost impossible to make a provisional diagnosis. Now, after infection has set in, these patients have a tendency to have chills and fever. We find changes in the urine. Tenderness makes us think we are dealing with the kidney. This may be cleared up by urological examination. When symptoms become acute, the obstruction has become more complete. When the patient presents those symptoms it is a great help in the provisional diagnosis. Cases presenting ptosis of the kidney should be followed at regular intervals. If pus or blood cells are found in the urine, they should make us suspicious that there is obstruction to the outlet of urine, which is the beginning of hydronephrosis. By the time we feel a large mass in the abdomen over the region occupied by the kidney, the organ has perhaps undergone so many pressure changes that serious damage has been done and it is a little bit late.

I just want to make one remark regarding children—children with respiratory or gastrointestinal infection. We find following this, in examining the urine, that it contains pus. The condition is pyelitis. But many, if followed through and the urine is examined for several weeks, are cases of hydronephrosis. The radiologist finds congenital hypertrophy of ureteral muscle or fibrous stricture near the bladder orifice, and the case is really hydronephrosis.

There is very little else I can add except that patients coming to us complaining of uneasiness, a sense of weight in the region of the kidney, there may be a tendency for us to place these patients in the neurasthenic group. All should receive a urinalysis. But if we follow them along, we finally find a few pus cells or albumin which

show that this case should go to the radiologist or urologist for treatment.

Irvin Abell, Jr.: A hydronephrotic kidney is of itself symptomless. The parenchyma of such a kidney may be over a period of years slowly destroyed, symptoms being produced only when either infection occurs or the condition producing the obstruction is re-established. It is important to appreciate the fact that hydronephrosis results not from an acute obstruction but from either a gradual or recurrent one.

Dr. Gaupin has already discussed the problem of infection, pointing out that this complication establishes urinary symptoms which attract attention to the urological system. As contrasted, to this, the symptoms resulting from interval recurrences of the obstruction are in the majority of instances abdominal in nature and in no way disclose or even hint at their origin. There is no lumbar pain, no urinary difficulty, and no marked gastro-intestinal disturbance. The characteristic history is one of an acute onset of abdominal pain in either the upper or lower quadrant of the side involved with mild nausea. Muscular guarding may or may not be present. Such a clinical picture suggests either a diseased appendix or gall bladder; and occasionally results in an operative procedure.

While one is always aware of this possible error in diagnosis, from time to time an abdomen will be opened and the anticipated pathology found to be absent. When this situation develops, the necessity of palpating the right kidney and even exposing it is obvious. We recently operated upon a 38-year-old woman, who for eight months had experienced repeated attacks of typical gall bladder colic. She had been thoroughly studied some months previously and because of a normal cholecystogram operation was deferred. The repeated attacks led us to assume that the stones were present but did not visualize. When exposed, the gall bladder was normal as were adjacent structures. Because of the clinical history the right kidney was exposed and a kinking at the utero-pelvic junction disclosed. Twenty-four months following nephrectomy this patient is entirely well. In a similar manner a hydronephrotic kidney was identified by palpation when an anticipated inflamed appendix was not found. A subsequent nephrectomy has given this patient relief.

In dealing with surgical conditions of the appendix and gall bladder the possibility of a hydronephrosis demands recognition: and, if on opening the abdomen the suspected pathology is not found, the kidney must be palpated.

E. L. Shiflett: My experience emphasizes that hydronephrosis practically always causes symptoms. One cannot separate practically the condition of hydronephrosis and the subjective symptoms even though this might be possible theoretically. The symptoms are frequently

vague, simulate intraabdominal disease, and are often treated medically and surgically as such. The urologist will tell you that many of his patients come to him after having had, without relief, one or several abdominal operations but is relieved when the kidney lesion is recognized and treated. I suggest that in all cases where the abdominal symptoms are vague that, at least, a scout roentgenogram of the urinary tract be made. It is surprising, at times, how much this clarifies a differential diagnostic problem. It has been our custom to make a scout film before gastrointestinal examinations and we detect a comparatively large number of surgical lesions of the kidney which have not caused kidney symptoms.

BOOK REVIEWS

THE COMPLEAT PEDIATRICIAN: A compilation of pediatric facts for the use of Medical Students, Internes, General Practitioners, and Pediatricians.

By Wilburt C. Davidson, M. A., D. Sc., M. D., 250 pages, cloth. Durham, N. C., Printed by Seeman Printery for Duke University Press, 1958.

One of the most valuable sections of this book is the preface written by the author himself, in which he explains the purpose of the volume and gives instructions for its understanding and use. By following these methods the physician should find it a most comprehensive handbook and an aid in making a diagnosis, but in no case must he suppose that it can take the place of a thorough and careful examination and history.

The chapters on laboratory procedure, nutrition and dietary tables are well gotten up. The tables of prescriptions and drugs are concise and practical, and the chapters on general care, though brief, give clearly the general outline to be followed.

The volume is well indexed and the cross references clear and concise.

INTERNE HANDBOOK—By members of the Faculty of the College of Medicine, Syracuse University under the Direction of M. S. Dooley, A. B., M. D., Chairman, Publication Committee. J. B. Lippincott Company, Publishers, Chicago. Second Edition.

"The intern is constantly meeting new situations, fraught with possibilities of dangerous mistakes for which he is ill-prepared. The authors have here met the problem of how to equip the interne with information for meeting emergencies without either writing a textbook or unwittingly making him a compend addict."

MANAGEMENT OF THE SICK INFANT AND CHILD.—By Langley Porter, B. S. M. R. C. S. (England) L. R. C. P. (London) Dean, University of California Medical School and Professor of Medicine, Formerly Professor of Clinical Pediatrics University of California Medical School, Visiting Pediatrician, San Francisco Children's Hospital, Consultant in San Francisco Department of Public Health and William E. Carter, M. D., Director, University of California Hospital Out Patient Department, Formerly Chief of Children's Clinic, University of California Hospital, San Francisco, Attending Physician San Francisco Hospital, Los Angeles County Hospital. Fifth Revised Edition. C. V. Mosby Company, Publishers, St. Louis, Price \$10.00.

This fifth edition has incorporated into many chapters the more important and practical things that have developed since former editions were published with the addition of methods applicable to older children as well as infants. The profession has for a long time felt the need of a single volume dealing exclusively with diseases as they manifest themselves during infancy and from a vast source of clinical study the authors have codified the material dealing with sick babies and have incorporated their findings in this book valuable to the general practitioner as well as the pediatrician.

TRAUMA AND INTERNAL DISEASE, A Basis For Medical and Legal Evaluation of Etiology, Pathology, Clinical Processes Following Injury. By Frank W. Spicar, A. B., M. D., F. A. C. P. Price \$7.00. J. B. Lippincott Company, Publishers.

The subject is important not only to the physician and his patient but also to the attorney, his client, to the court, to the industrial commission, insurance companies and employer. The physician and his patient are the ones most interested. The purpose of the book is to present a careful study of the role of trauma as an etiological factor in the causation of disease of the viscera and bodily structure and a discussion of the etiology, pathology, clinical processes, and end results of serious or apparently trivial injuries, together with their early or tardy manifestations and effects upon a healthy organ. A discussion of fractures, open wounds or traumatic surgery or occupational diseases is included only to the extent that they may pertain to post traumatic diseases. The most important conditions following trauma are discussed in this book.

THE VITAMINS AND THEIR CLINICAL APPLICATION, by Prof. W. Stepp, Docent Kuhnau, Dr. H. Schroeder and H. A. H. Bouman, M. D., translator. The Wisconsin Cueno Press, Inc., Milwaukee, Wis. Price \$4.50.

This enlightening and intensively practical manual on Vitamins has recently been translated by H. A. H. Bouman, M. D., of Minneapolis, Minn., and should be of interest to every physician who wants to understand the use of vitamins in his daily practice.

Practically no other branch of research has survived such tempestuous development as has vitaminology. The advantage of being able to work with pure substances is very evident and the busy physician in general or hospital practice may now through his manual inform himself in vitaminology by means of its lucid practical presentation.

The manual takes up each of the known vitamins separately, giving its history, chemistry, determination, occurrence, manifestations, absorption, clinical application, physiology, preparation and dosage.

Included is a chart of the survey of vitamins known today and a chart showing contents of essential vitamins in various diets.

Valuable information is given in the chapters on Terminology of the Vitamins, Vitamins and Human Nutrition and The Daily Vitamin Requirements for man. Extremely helpful is the extensive bibliography given for each of the vitamins.

In short, it is a well written, easily understandable, intensely practical reference book that should be in the library of every practicing physician.

This book is available from the Vitamin Products Company, Milwaukee, Wisconsin.

EYE STRAIN AND CONVERGENCE by N. A. Slutterhem, M. D. (Rand) Arts (Staatsexamen, Holland) Part-time Ophthalmic Surgeon to the Johannesburg School Clinic, Transvaal Education Department. Late Assistant Eye Clinic, University, Leyden, H. K. Lewis & Co., Ltd., London. Publishers Price 7-6 net.

This volume is intended for both general practitioners and ophthalmologists and shows them how to deal satisfactorily with the extremely frequent complaint of eyestrain. The diagnosis and treatment has been given careful consideration based upon physiology as all his methods are based upon physiology.

It is a pleasure to welcome to America this book by such a distinguished author.

THE TREATMENT OF FRACTURES.—By Charles Locke Scudder, A. B., Ph.B., M. D., F. A. C. S., Consulting Surgeon to the Massachusetts General Hospital; Formerly Assistant Professor of Surgery at the Harvard Medical School; Fellow American Surgical Association; Member of the American Society of Clinical Surgery. Eleventh Edition. Revised. 1209 pages with 1717 illustrations. W. B. Saunders Company, 1938. Philadelphia and London. Cloth, \$12.00 net.

This new eleventh edition of Scudders on Fractures is a welcome addition to the surgeon as well as the general practitioner. This edition has completely been rewritten so that it is really a new book. None of the features that has made this book an authority for years have been omitted, it has been much improved and has been brought into thorough accord with the very latest practice in diagnosing and treating fractures. Anatomic and physiologic facts are stressed, methods of examination are described in the most specific detail.

IN THE NAME OF COMMON SENSE, by Dr. Nathen N. Chappell. Dr. Chappell deals with the psychological and physiological aspects of "worry." Worry is only a common practice resulting from the complexities of civilization, creating havoc and discord in international, industrial, social, and family activities. He describes in a very fascinating manner the common characteristics of the worrier and reckons the cost of worry in terms of illness, medical bills, lost wages and opportunities; in terms of mental agitation, irritability, family discord, undesirable personality traits, and adverse influence on friends, family and children. And while he does not claim to have solved all the mysteries of worry, he does give practical and adaptable means of correction; and his book may be understood and read with as much interest by the layman as by the profession.

WHAT'S WRONG WITH ME?—By H. Ameroy Hartwell, M. D., 1938. The Country Life Press, Garden City, New York. First Edition.

The author states that he is presenting this volume to provide a ready reference in the form of a concrete and concise outline for the study of complaints.

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EDITORIALS

PHYSICIAN'S RESPONSIBILITY IN LUNACY INQUESTS

In this issue of the Journal there is an article by Doctor J. G. Wilson, Director of the Division of Hospitals and Mental Hygiene, entitled "The Responsibility of the Physician in Lunacy Inquests," to which we hope all our readers will give careful consideration.

We all know that a great deal of improvement has been made in the State Hospital service since the passage of the Chandler-Wallis Act, but perhaps the profession at large is not fully cognizant of the difficulties under which the newly created Division still labors.

In framing this Act, the Governor and the Legislature were in constant conference with the Attorney General's Office and a board of Medical Advisors consisting of Doctors A. T. McCormack, W. E. Gardner, Spafford Ackerly, Lawrence Kolb, and J. G. Wilson. It was fully realized that the Act, as finally drawn and passed, had many short comings, but it was not thought best to embody in it any provision which could not be enforced without organized opposition. This was the reason that no attempt was made to repeal the antiquated statutes providing for jury trials in lunacy inquests. Some day, in the not too distant future, we hope that public opinion will demand this repeal and substitute for jury trial inquests conducted solely by the judge and a board of psychiatrists certified by the Division of Hospitals and Mental Hygiene as competent for this specific duty. But, in the meantime the medical profession can help the exceedingly difficult situation of overcrowding in State institutions by exercising extreme care in examining those cases they are asked to certify as lunatics or of unsound mind. They should at least think twice before they label ordinary drunks, bad boys and girls, troublesome and querulous old persons, fighting husbands and wives, and hysterical men and women as feeble-minded or insane.

INFORMATION FOR THE NEW DIRECTORY

Have you mailed new information for the American Medical Directory? During the months of July and August, an information card is being sent from the Directory Department of the American Medical Association to every physician in the United States and Canada. The information thus secured is to be used in the compiling of the Sixteenth Edition of the American Medical Directory.

The Directory is prepared every two years in the Biographical Department of the Association. The last previous Directory appeared in 1938. The new edition will appear in 1940. This volume is one of the most important contributions of the American Medical Association to the work of the medical profession in the United States. It provides authentic information concerning medical colleges, specialization in the field of medical practice, memberships in special medical societies, tabulations of medical journals and medical libraries and, indeed, practically every important factor concerning the medical profession in which anyone might possibly be interested.

Therefore, those who receive this card should fill it out and return it promptly whether or not any change has occurred in any of the points on which information is requested. Should any reader fail to receive a card before September 1, he may aid by writing at once to the headquarters office of the American Medical Association stating that fact and indicating such changes as he may desire in the information published in the 1938 issue of the Directory.

ORGANIZED PAYMENTS FOR MEDICAL SERVICES

The Bureau of Medical Economics, American Medical Association has just released a splendid one hundred and eighty-five page booklet under the above title. It would stretch the imagination of a social planner to devise any scheme for the organized payment for medical services that is not described in this publication of the Bureau of Medical Economics of the American Medical Association on the subject. Several hundred plans for medical care of the indigent involving governmental support and medical society management are explained. Social Security legislation has brought about changes in medical arrangements reaching into almost every locality in the United States and affecting health departments, medical societies, and state and local governments. Types of plans proposed by the Farm Security Administration to provide medical service to Administration clients in 127 counties and covering 100,000 low income families are described. Medical societies have organized postpayment and prepayment plans of medical care offering a wide selection of types. Some provide for a cash indemnity to be paid to the insured with which he can purchase his own medical service and others provide medical service directly.

Industries, unions, fraternal organizations,

and all sorts of mutual societies provide medical benefits for their members by a variety of prepayment devices. Some 3,000,000 persons are covered by group hospitalization plans, which show a wide variety of relations with state and county medical societies. Commercial insurance companies, all of whom pay benefits in cash, are also entering this field on a large scale. It is estimated that approximately \$300,000,000 in cash is paid out annually by insurance companies to assist in paying medical bills.

The House of Delegates of the American Medical Association has endorsed cash indemnity prepayment plans, but has not sought to prohibit any of its component societies from cooperating with or organizing other types of prepayments for medical service provided their character is not such as to render it impossible to give good medical service.

The number and variety of the plans for medical services—operating and proposed, postpayment and prepayment, service and cash, medical society and other organizations sponsored—give proof of the efforts that are being made to supplement the private practice of medicine and indicate a desire to discover, by social experimentation, a solution of local medical problems.

STUDY OF SUBSTITUTE FOR MORPHINE

Physicians in Kentucky will be especially interested in the study of the substitute for morphine which has been undertaken by the United States Public Health Service. The clinic for this study has been conducted largely at the United States Public Health Service Hospital at Lexington, and progress reports have been made from time to time to large groups of Kentucky physicians who had the privilege of assembling there for that purpose. Statement of the progress made so far is as follows:

"In recognition of the progress of Dr. Lyndon F. Small and Dr. Nathan B. Eddy of the United States Public Health Service in their quest for a substitute for morphine, Commissioner of Narcotics H. J. Anslinger presented to them Tuesday, June 27, 1939, the 1938 award of the American Pharmaceutical Manufacturers Association for the year's most outstanding chemical research.

The presentation was made during sessions of the association's annual meeting at Skytop, Pennsylvania. Commissioner Anslinger will represent the Committee on Drug Addiction of the National Research Council, coordinating agency for the research of which the Public Health Service chemists' studies are a part. Small and Eddy have

been conducting experiments on the chemistry and pharmacology in the morphine series, synthesizing substances with narcotic action and making clinical studies of drug addiction.

Dr. Small is a consultant at large for the Public Health Service's Division of Mental Hygiene for field studies and investigation of narcotic drug addiction, and has been conducting his work in chemistry at the University of Virginia.

Dr. Eddy is a consultant biologist in alkaloids, who has made investigations in chemotherapy and pharmacology at the University of Michigan. The investigations at these institutions have received financial aid from the Rockefeller Foundation.

The two chemists are only two of the many scientists who are attempting to solve the problem of habit-forming narcotics through the unified efforts of the Committee on Drug Addiction. The clinical work has been carried on under the guidance of the Public Health Service, and the Committee decided to foster an investigation in the chemistry of narcotics in order to ferret out the nature of drugs themselves and determine the possibility of producing a synthetic drug which would lessen the danger of addiction."

SOUTHERN PSYCHIATRIC ASSOCIATION

Dr. Newdigate M. Owensby, of Atlanta, Secretary, on behalf of the officers of the Southern Psychiatric Association, which will hold its fifth annual meeting at the Brown Hotel, Louisville, Monday and Tuesday, October 9th and 10th, 1939, extends to all physicians of Kentucky and their families a cordial invitation to attend its scientific sessions and social functions. Papers or addresses will be delivered by numerous psychiatrists of national prominence, including Dr. Charles S. Holbrook of New Orleans, President of the Association; Dr. Arthur H. Ruggles, of Providence, Rhode Island, Secretary of the American Psychiatric Association and President of the National Committee for Mental Hygiene, and Dr. Harvey M. Watkins, Superintendent of Polk State School, Polk, Pennsylvania, and past President of the American Association for the Study of Mental Deficiency. Papers will also be presented by Kentucky physicians, including a surgeon and an internist.

The Kentucky Psychiatric Association, of which Dr. Spafford Ackery of Louisville is President and Dr. Floyd K. Foley of Lexington, President-elect, will meet conjoint-

ly with the above association, acting largely in the capacity of host, but will hold its own business session after the program of the guest association has been completed. Notices of the latter meeting will be sent to all members by Dr. Robert T. Felix, Secretary, Lexington. A combined meeting of these two important associations, occurring about a month following the annual meeting of the Kentucky State Medical Association, will be of particular interest to the Kentucky physicians and should be well attended by them, especially at a time when the relationship of psychiatry to other branches of medicine is becoming increasingly important.

Final plans for the meeting are now being completed by Dr. William E. Gardner, Chairman of the Committee on Arrangements, and Dr. William K. Keller, local Chairman of the Program Committee.

THE ANNUAL MEETING

The August issue of the JOURNAL, which is the Annual Number has been mailed to members of the Association in ample time for each to become thoroughly familiar with the financial affairs of the organization. Voucher checks, covering every item of expense, have been published as written. Delegates owe it to themselves, as well as to the Association, to study expenditures carefully in order that they may be prepared to offer intelligent suggestions for better administration of the Association's financial affairs.

The preliminary program has also been published in order that members may have opportunity to study the various scientific subjects. Intelligent, terse discussions increase the value of the papers and add zest to the meeting.

All the technical exhibit space has been sold. Fees from exhibitors contribute materially to covering the expense of the Annual Meeting, while the exhibits themselves serve to familiarize members of the profession with the latest literature, physical therapy and new drugs which are so essential to the successful practice of modern medicine.

The Scientific Exhibits have become so numerous that an entire floor of the Library Building has been assigned to them and to the Hobby Exhibit. There is, however, still place for hobbies, and Dr. Jesshill Love, Louisville, Chairman, requests doctors to contribute any hobby material—still life and movie camera pictures and anything else however trivial—upon which they depend for relaxation from the daily grind. The entertainment provided, including swimming, bridge, barbecue and burgoos, are sufficient to make this a vacation enjoyable by the whole family at a moderate expense.

COUNTY SOCIETY REPORTS

Southwestern: On Tuesday evening, August 1, at the quarterly meeting of the Southwestern Kentucky Medical Society, which met in Bardwell, Philip F. Barbour, and Lee Palmer, of Louisville, furnished the program.

Lee Palmer discussed the "Use of Sulfapyridine in the Treatment of Pneumonia in Children" and Philip Barbour talked about the "Acute Abdomen in Children". This proved to be one of the best quarterly meetings the society has ever held.

The attendance was above the average, and all the doctors were extremely interested in the two subjects discussed, and I feel sure from the comments I heard, that every doctor that was present will be better able to properly handle their acute abdominal cases, and will know how to treat their pneumonia patients who otherwise might have died.

T. J. MARSHALL, Secretary

Rockcastle: The Rockcastle County Medical Society has had regular meetings at the Dixie Boone Hotel, Mt. Vernon. The following programs have been presented:

Hypertension, Lee Chestnut, May 5.

Clinical Diagnosis, T. A. Griffith, June 2.

Syphilis As A Cause of Delayed Resolution in Pneumonia With Case Reports, Walker Owens, July 7.

The doctor pointed out that since syphilis is so frequently present in the age group which pneumonia frequently occurs in, we should reconsider it as a possible cause in unresolved pneumonia. Dr. Lewis will present a Paper: "Differential Diagnosis Of Coma" at the meeting August 4, 1939. Dr. M. Pennington has been ill for several days. At the next meeting August 4, 1939 there will be election of Delegates to the State Medical Meeting.

T. A. GRIFFITH, Secretary

NEWS ITEMS

Dr. John W. Fish has now opened offices in the Brown Building, 321, West Broadway, Louisville, with practice limited to diseases of the eye.

Dr. Hugh R. Leavell, health officer of the City of Louisville, has returned from a year's study at Yale University School of Public Health, with a degree of Doctor of Public Health. Dr. Leavell will be remembered as the official health officer during the Louisville flood. He has reorganized the Department of Hygiene and Public Health

at the University of Louisville, and inaugurated a splendid teaching and demonstration program for medical students. Louisville is very fortunate in having such an efficient health officer. Dr. Gracie Rowntree, acting health officer in Dr. Leavell's absence, won much praise and commendation for his splendid work during Dr. Leavell's absence.

Dr. Grace Abbott, known internationally for her work in infant and maternal mortality, child welfare and juvenile delinquency, died June 19th at the Albert Merritt Billings Hospital, Chicago.

Doctor Abbott was head of the Children's Bureau, United States Department of Labor, from 1921 to 1934, having served through four presidential administrations before resigning to become professor of public welfare administration in the School of Social Service of the University of Chicago. In a national poll conducted in 1931, she was chosen as one of America's twelve most distinguished women. She was a frequent guest and admirer of the Child Health Division of the State Board of Health.

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Aye, the milk, thou divinely given food, thou food of all foods. Most wonderful nourishment art thou. White as snow, white as the robes of angels, white as purity itself. Most marvelous in composition. Thou containest every element necessary to nourish babies. Thou art food and drink in one. Without you, children cannot grow into strong youth and strong manhood. For the aged, thou leadest all other nourishment. Thou containest salts and minerals in exactly the right form and proportion. Thy fats, thy cheesy substances, thy sugars and thy vitamins, no other foods can equal. What a blessing art thou when thou comest in purity and cleanliness; and what a curse thou art when foul and dirty. Oh base is he who brings us dirty milk. Its germs of illness and of death work pain and sorrow. Nature gives us milk that is clean and pure; only indecent men fail to keep it so. Great indeed is the responsibility of those who deal in milk. If their service is unclean, pestilence and death will follow. Oh wondrous milk, in thy purity thou bringest to babes and sucklings jocund health with its joy and beauty. Oh milk, thou art a living, continuing blessing, and we salute thee.

Indiana Health Bulletin, June, 1939

Talk of your science, when all is said,
There's nothing like a bare and shining head,
Age lends the graces that are sure to please,
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—Oliver Wendell Holmes in "Rip Van Winkle, M. D."

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KENTUCKY MEDICAL JOURNAL



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OCTOBER, 1939

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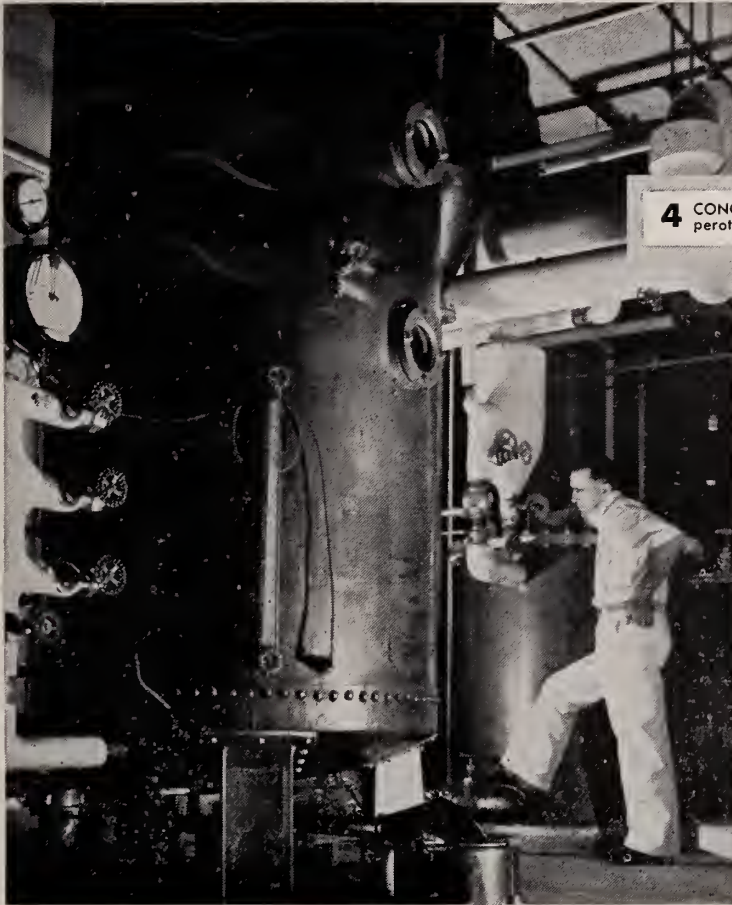
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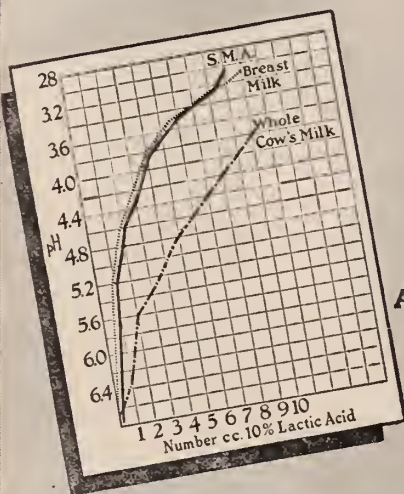
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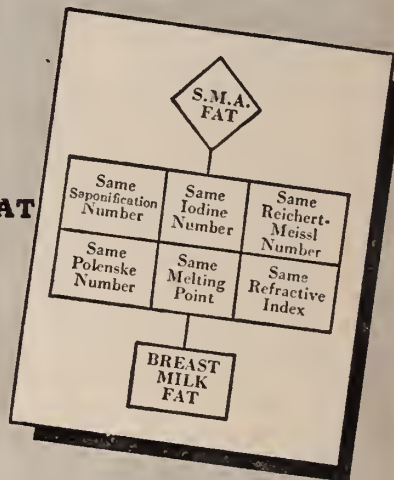
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pH.....	6.8-7.0	6.97
Δ.....	0.56-0.61	0.56
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Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245 ☐

N. Y. State Jour. Med. 1935, 35-No. 11,590 ☐

Laryngoscope, 1935, XLV, 149-154 ☐

Laryngoscope, 1937, XLVII, 58-60 ☐

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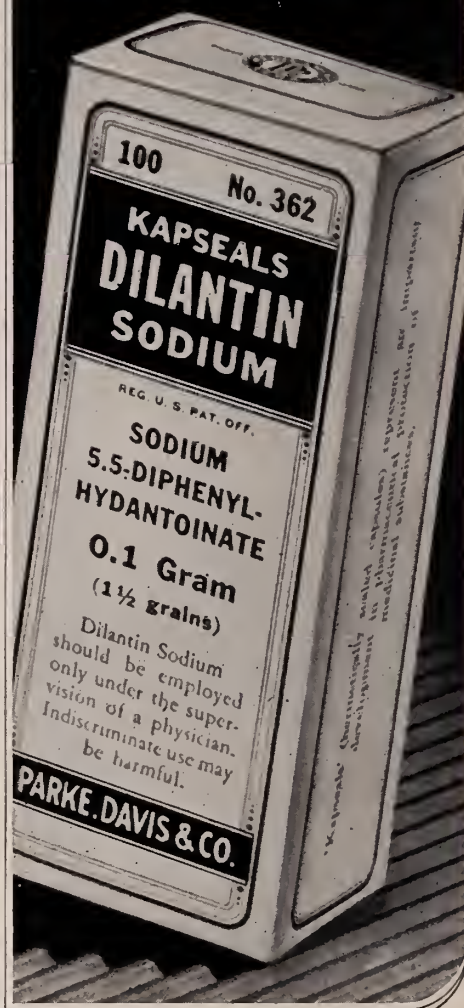
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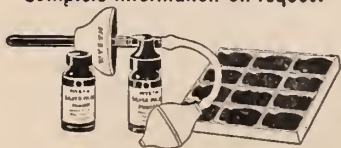
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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Adair	N. A. Mercer	Columbia	October 4
Allen	A. O. Miller	Scottsville	October 25
Anderson	J. B. Lyen	Lawrenceburg	October 2
Ballard	F. H. Russell	Wickliffe	
Barren	Rex Hays	Glasgow	October 18
Bath	H. S. Gilmore	Owingsville	October 9
Bell	E. S. Wilson	Pineville	October 13
Boone	R. E. Ryle	Walton	October 18
Bourbon	Eugene L. D. Blake	Paris	October 19
Boyd	Hubert J. Pritchard	Catlettsburg	October 3
Boyle	P. O. Sanders	Danville	October 17
Bracken-Pendleton	W. A. McKenney	Falmouth	October 26
Breathitt	Philip Bress	Jackson	October 17
Breckenridge	J. E. Kincheloe	Hardinsburg	
Bullitt			
Butler	G. E. Embry	Morgantown	October 4
Caldwell	W. L. Cash	Princeton	October 3
Calloway	Hugh L. Houston	Murray	October 12
Campbell-Kenton	Joseph H. Humpert	Covington	October 5
Carlisle	E. E. Smith	Bardwell	October 3
Carroll	J. M. Ryan	Carrollton	October 10
Carter	Don E. Wilder	Grayson	October 10
Casey	William J. Sweeney	Liberty	October 26
Christian	D. M. Clardy	Hopkinsville	October 17
Clark	R. E. Strode	Winchester	October 20
Clay	J. L. Anderson	Manchester	October 10
Clinton	S. F. Stephenson	Albany	October 21
Crittenden	C. G. Moreland	Marion	October 9
Cumberland	W. F. Owsley	Burkesville	October 4
Daviess	James E. Hix	Owensboro	October 10 & 24
Elliott			
Estill	Virginia Wallace	Irvine	October 11
Fayette	D. E. Scott	Lexington	October 10
Fleming	Roy Orsburn	Flemingsburg	October 11
Floyd	J. G. Archer	Prestonsburg	October 25
Franklin	Grace R. Snyder	Frankfort	October 5
Fulton	J. C. Morrison	Fulton	October 11
Gallatin	J. M. Stallard	Sparta	October 19
Garrard	J. E. Edwards	Lancaster	October 19
Grant	Paul E. Harper	Dry Ridge	October 18
Graves	H. H. Hunt	Mayfield	October 3
Grayson			
Green	S. J. Simmons	Greensburg	October 2
Greenup	R. L. Compton	Greenup	October 13
Hancock	F. M. Griffin	Hawesville	October 2
Hardin	D. E. McClure	Elizabethtown	October 12
Harlan	W. E. Riley	Harlan	October 21
Harrison	W. B. Moore	Cynthiana	October 2
Hart	S. F. Richardson	Munfordville	October 3
Henderson	J. Leland Tanner	Henderson	October 9 & 23
Henry	Owen Carroll	New Castle	October 5
Hickman	Layson B. Swann	Clinton	October 5
Hopkins	David L. Salmon	Madisonville	October 5
Jackson			October 7
Jefferson	W. B. Troutman	Louisville	October 2 & 16
Jessamine	J. A. VanArsdall	Nicholasville	October 19
Johnson	P. B. Hall	Paintsville	October 14
Knox	W. Parker Clifton	Barbourville	October 19
Larue			
Laurel	Oscar D. Brock	London	October 11
Lawrence	L. S. Hayes	Louisia	October 16
Lee	W. D. McCollum	Beattyville	October 19
Leslie			
Letcher	J. E. Johnson	Jenkins	October 31
Lewis	C. P. Pennington	Vanceburg	October 16
Lincoln	Lewis J. Jones	Hustonville	October 20
Livingston	O. M. Fischbach	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	October 3
McCracken	J. V. Pace	Paducah	October 25
McCreary	R. M. Smith	Stearns	October 2
McLean	A. R. Will	Oshtown	October 12
Madison	C. B. Billington	Richmond	October 19
Marion	W. E. Oldham	Lebanon	October 24
Marshall	S. L. Henson	Benton	October 18
Mason	C. W. Christine	Maysville	October 11

COUNTY	SECRETARY	RESIDENCE	DATE
Meade			October 26
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	October 10
Metcalfe	E. S. Dunham	Edmonton	
Monroe			
Montgomery	D. H. Bush	Mount Sterling	October 10
Morgan			
Muhlenberg	E. L. Gates	Greenville	
Nelson	R. H. Greenwell	Bardstown	
Nicholas	T. P. Scott	Carlisle	October 16
Ohio	Oscar Allen	McHenry	October 4
Oldham			October 3
Owen	K. S. McBee	Owenton	October 5
Owsley			October 2
Perry	W. W. Buckhold	Hazard	October 9
Pike	H. K. Bailey	Pikeville	October 16
Powell	I. W. Johnson	Stanton	October 2
Fulaski	M. C. Spradlin	Somerset	October 12
Robertson			
Rockcastle	Lee Chestnut	Mount Vernon	October 6
Rowan	A. W. Adkins	Morehead	October 9
Russell	J. R. Popplewell	Jamestown	October 9
Scott	Carl M. Gambill	Georgetown	October 5
Shelby	A. D. Doak	Shelbyville	October 19
Simpson	N. O. Witt	Franklin	October 10
Spencer			
Taylor	W. B. Atkinson	Campbellsville	October 5
Todd	B. E. Boone, Jr.	Elkton	October 4
Trigg			October 25
Trimble			
Union			October 25
Warren-Edmonson	W. O. Carson	Bowling Green	October 11
Washington	J. H. Hopper	Willisburg	October 18
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	October 27
Whitley	C. A. Moss	Williamsburg	
Wolfe	G. M. Center	Campton	October 2
Woodford	George H. Gregory	Versailles	October 5

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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 37, No. 10

BOWLING GREEN, KY.

OCTOBER, 1939

PRESIDENT'S ADDRESS

"THAT THE PROFESSION SHOULD
BECOME MORE CAPABLE AND
HONORABLE WITHIN ITSELF"

JOHN W. SCOTT, M. D.,

Lexington

Can anybody remember when the physician did not view the future with grave misgivings? A hundred and fifty years ago, in a period not unfavorable to the progress of medicine, John Abernethy, a student of John Hunter's, is said to have exclaimed to a class of medical students, "Good God, gentlemen, whatever is to become of you." Perhaps one should be allowed an outburst like this without too strict accounting, yet, coming as it did from the great surgeon and teacher of St. Bartholomew's, it at least reflects concern for the future of the profession.

Today the most thoughtful and courageous may well wonder what is to become of us, beleaguered as we are without and betrayed within. Politicians, sociologists and pressure groups of industrial workers, impelled by various motives, are seeking to recast the practice of medicine, giving scant consideration to the age long methods and standards which have brought it to its present level of usefulness. Small wonder that the more timid souls among us are demoralized with fear and that we hear such despairing cries as that coming from the president of a great body of American physicians who said recently, "A social tidal wave has shaken our edifice from its foundations. We may now prepare to swim for our lives."

In Kentucky, to which tidal waves both social and physical are foreign, we refuse to believe we are in such utter rout. We have rather the spirit of the Roman who, according to Milton, "When Rome was nigh besieged by Hannibal bought that piece of ground at no cheap rate whereon

Hannibal himself encamped his own regiment."

It would be mere bravado not to confess concern in our present crisis. An important though self-constituted committee within our own ranks has uttered the dictum that the health of the people is the direct concern of the government. If such a totalitarian principle should prevail the logical consequence inevitably would make the medical profession an agency of Government. With our experience of medicine under governmental control, its equipment extravagant in the extreme, its personnel demoralized by the manner of its employment and the conditions under which it must work, such a prospect fills us with dread. Increased power with inevitable dominance of political factors certainly will increase these evils. The enormous expense of such a program appalls us both as physicians and as tax-payers. It is with great difficulty that our local governmental units are meeting the present relatively small demands involved in the care of the indigent sick, even under economical hospital administration, aided though they are by private philanthropy and by the willing gratuitous service of the physician. Conceive, if you can, of the tax burden when, with the volume of work increased, hospital administration becomes extravagant instead of economical, a salaried medical personnel takes the place of one serving gratuitously and private philanthropy is no longer available. Increased taxation will dry up the sources of philanthropy and governmental control will destroy the incentive for it. Gifts are rarely made to the Government. Does any one ever give to the army or navy, important as their objectives are?

The profession is hardly less threatened by the plans proposed by our own organizations. All of these contemplate a public health service having its personnel expanded so greatly that by weight of numbers and organization the autonomy of the profession would be jeopardized.

Plans now proposed in the House of Del-

legates of your association in particular give us concern. These relate to the control of the expanded health service and of the large sums of money expected under anticipated health legislation. Only a few days ago a distinguished commentator pointed out that the problem of checks and balances to power has concerned all great political philosophers from Moses and Plato and Aristotle to Mill and Hamilton, though the "intellectuals" of the present day are no longer disturbed by such problems. The strife now rending the world may be traced to the violation of this principle. Likewise the medical profession becoming, as it would, a powerful agency of the state is in grave peril when it disregards these checks and balances to power. Such checks are notably lacking in the plans referred to. Rarely is there an individual so great or so noble that he can be entrusted with unbalanced power without grave danger to his own character and to the institution of which he is at first the servant and finally the master.

Even though these plans should make for efficiency, which is doubtful, this would be gained at grievous cost. Such sacrifice of principle to expediency is peculiarly foreign to us, our roots so deep in the past, our method so tried and sure that it has withstood the vicissitudes of twenty-five centuries. Life itself is said not to be "so dear, or peace so sweet as to be purchased at the price of chains and slavery." These plans presented to your House of Delegates can well be scrutinized and reinforced with checks and balances to the power that will be involved in the administration of these large sums.

Those of us who have no talent for statecraft are not reluctant to leave this caldron of politics and turn to a closer view of our subject, "that the profession should become more capable and honorable within itself." Its constitution declares this to be one of the objectives of our association. Its purpose is to advance the profession's efficiency, not by improving its political or tactical position, not by increasing its pecuniary rewards, not by protecting it against encroachment upon its prerogatives, not by improving its solidarity, worthy as these objectives may be. Its purpose, more noble than any of these, consists of one simple aim, to make each of us a better physician.

The aspirations of our profession like those of every institution are limited by the human fallibility of those who compose it. The material of which it is made is human. The function of education is to take this material and make the most of it. That it

should begin while this is still plastic no one questions. Some would begin early to emphasize what Huxley calls "things and their forces" and very early, in the case of those destined for medicine, to limit education for the most part to subjects related to it.

Others, more wisely, early would emphasize the study of "men and their ways" as well as of "things and their forces." Holding, with Dean Inge, that the "aim of education is knowledge, not of facts, but of values." No one but a mystic would disparage facts. But these may be catalogued and indexed, available to all who have learned how to look for them. On the other hand a sense of values is the very warp and woof of the soul, the pattern which once formed is character, ever afterward shaping as well as using its material instruments.

Education is by no means necessary to mental capacity and vigor. These are Nature's gifts. But without it there is no perspective, no power of abstraction; objects are seen "always near and never in the horizon."

This idea of education takes issue directly with those who hold, as many do, that once medicine has been selected as a career, study not directly related to it is wasted. Between the two ideas there is a gulf as wide as that between the university and the trade school; the prototypes of one, Hippocrates and Galen, of the other, the skilled craftsmen of early days. Such education leans heavily upon the personality of the teacher. Some great soul, perhaps in the student's earliest years, perhaps in the college or medical faculty may breathe into him divine fire which is never to fail. Many have had this fortunate experience, perhaps from some teacher quite unknown to fame, perhaps from a Welch, a Billings or a Ewing. In the often quoted lines, "Give me a log hut with only a simple bench, Mark Hopkins on one end and I on the other and you may have all the buildings, apparatus and libraries without him."

So in educating a physician we would begin in his infancy or better in that of his father or his father's father. Many of you now insensibly are beginning the education of a physician in a child in your household. In these plastic years the enduring mold of his mind towards medicine is being cast. May you feel charged with your responsibility in making these first impressions which are never to be effaced, remembering that "the beginning is the most important part of the work." May you also impress upon the child his debt to the past.

Perhaps you may be able to protect him from the so-called progressive methods of education of the day which would take the word "must" from their discipline. Discipline without this word and its implications is inconceivable. And education without discipline is a paradox. In the high school years the utilitarian trend is increasingly manifest. There the usefulness of the abstract is almost an article of faith.

In college the student meets the great hazard of the premedical course, an effort badly contrived, I think, though for the most part sincere, to prepare the youth in four years to begin the study of medicine. The fundamental error in these courses is failure to differentiate between two kinds of students, the one such as the engineer who in his undergraduate years must receive full training for his profession and the other who after his undergraduate years intends to begin his professional education. On Commencement Day the one must be ready to take a job, the other to begin at least five years of preparation for his job. The four college years of the first, which are the analogue of the years in medical school are crowded with mathematics and applied science and with the laboratory work of the shop. Many engineers of broad culture deplore the inevitable curtailment of the humanities even in their training.

The fallacy of crowding the pre-medical years with subjects better left to the medical school is apparent. The latter should be trusted to define its own requirements. Many of these schools require a bachelor's degree including certain natural science which is prescribed. It is fair to assume that the remainder of the course is expected to be devoted to cultural subjects. This however, fails to satisfy the desire of some of our colleges to teach medicine. They insist upon giving the student medical studies beyond these requirements. A student stimulated by his teachers to ideas beyond his capacity becomes restless of even medical science that is basic and demands discussion of pathology and even of treatment. Thus not only is time wasted but he falls victim to the vicious habit of forming opinions upon subjects he knows nothing about.

In place of this it seems that even some knowledge of Greek might be useful in preparation for study of a subject whose very terminology is constructed from it. Mental training and a concept of the nuances of language gained from it might prove as helpful as the dissection of a cat. The premedical student, therefore, should be advised to avoid the formal premedical course, to learn the requirements of the

medical school of his choice, and with what remains of his time, to make an effort to broaden and not to narrow his education.

Of education in the medical school I shall speak briefly. It would be rash indeed to do otherwise in the presence of the splendid educators in our own ranks and particularly of our distinguished guest (Dr. Louis Hamman, Baltimore) who brings to the medical student of today the spirit and method of Osler, whose student he was. It was Osler who took the medical school into the hospital initiating a new era of medical education in the English speaking world. In addition to this technical advance of the first order no one proclaims so clearly medicine's debt to the past. So eminent was he as a classical scholar that while Regius Professor at Oxford he was made president of the Classical Association. This was an honor that had not been given to a physician since Thomas Linacre, the founder of the Royal College of Physicians four hundred years before. Again and again he pays tribute to the ancient Greek, "like everything that is good and durable in this world modern medicine is a product of the Greek intellect," and again, in one of his addresses a passage of such beauty that I shall quote it at length: "No other profession can boast of the same unbroken continuity of methods and of ideals. We may indeed be justly proud of our apostolic succession. Schools and systems have flourished and gone, schools which have swayed for generations the thought of our guilds, and systems that have died before their founders; philosophies of one age have become the absurdities of the next; and the foolishness of yesterday has become the wisdom of tomorrow; through long ages in which we were slowly learning what we are hurrying to forget, amid all the changes and chances of twenty-five centuries, the profession has never lacked men who have lived up to these Greek ideals. They were those of Galen and Aretaeus, of the men of the Alexandrian and Byzantine schools, of the best of the Arabians, of the men of the Renaissance and they are ours today."

To maintain this unbroken continuity of methods and ideals is the duty of every physician. Our teachers of medicine are charged peculiarly with this obligation. No one in this, or, I think, in many generations has fulfilled this duty so well as has this great teacher. Long will his spirit and example continue to inspire the teachers of medicine.

When formal education is over and the physician leaving the discipline of the college and hospital is thrown upon his own

resources in practice, the test of his education and its recreative power comes suddenly upon him. While education is a life long thing it may end before the death of the body with the death of the intellect. This dies if it does not grow. Isolation is its enemy. The name is legion of the physicians, truly great, who in obscurity have prevailed against this powerful foe. Our concern is with the problem of these and not of those who have the stimulating contacts of the teaching hospital.

The solution of the problem of those in remote places is in the apostle's injunction "not forsaking the assembly of yourselves together." The Alpha and Omega of this command is, to many of these, the county society. As its membership is small and the difficulty of maintaining it increases so does the need for it become more vital. When the county society does not survive, the salvation of the doctor's intellectual life is more than ever in his automobile. Hardly anyone in this state is out of reach of a medical meeting where each month like Antaeus in the fable he may gain strength from contact. But with a will to a society the members required are few.

At the meeting the scientific program, the "paper," is the thing. "Ay, there's the rub." Busy with the multifarious and burdensome calls of a country practice, realizing that he "knows less and less about more and more," one of those perhaps whose faculties are benumbed when he takes a pen in hand he finds he must become creative and produce a paper. This is a Herculean task and the rock upon which many a county society has come to grief. Yet a program is necessary as a basis for discussion.

A little tried method to relieve this difficulty deserves consideration. The review of an article in current medical literature may well replace the customary paper. The plan is in common use in discussion groups in cities but is rarely used where it would serve its most useful purpose. This review involves in its selection and preparation little burden of time and study, only thought and interest stimulating in its exercise to reviewer and hearers alike. Discussion is all the freer since the opinions expressed are impersonal. Only one journal is necessary for review; as interest grows need for others will be manifest. This plan is not stereotyped and may easily be adapted to the varied needs of county societies.

After all the medical society, large or small, must do its own work. Education

cannot be conferred passively. No flying squadron of specialists though imbued with the finest missionary spirit can do much more than stimulate its hearers actively to acquire knowledge. Excellent provision has been made for refreshing the practitioner and imparting this knowledge but the prime requisite is the thirst for it. Once this is experienced it will find means of satisfying itself.

And so the education of the physician continues from childhood to old age. A concept of the value of the various factors which compose it has been set forth to you. Certainly natural gifts play no small part in the result. Wise education will only increase the good and lessen the evil, but may do it to such effect that "the elements may be so mixed" that many even in these remoter places will come to the finest flower of our system. There are, for example, few things more inspiring than, to sit in a clinico-pathological conference and there always to find those who, to refresh themselves, have come from a distance, at expense of time, trouble and money. It is a delightful experience to meet there, as we in Lexington often do, a certain specialist, in a field remote from most of the cases observed, himself well along in the seventh decade, coming from his home forty miles away joining with interest and acumen in the discussion. No dearth of opportunity at home impels him; his is a good county society and this is only one of his medical recreations.

There are fortunately others like him in the experience of many of you. Were it not begging the question such a one might be cited as proof of our argument, but it is not for us to say how much of this is nature's gift of a great soul and an inquisitive mind and what part education played in developing him. Paraphrasing Tennyson we may say of these:

" . . . if I could understand

What you are, (mind and soul) and all in all

I should know what God and man is."

That is to say, in conclusion: the mixture of heredity, environment and education that makes the ideal physician is inscrutable. Over his heredity and environment there is little control. His education can be controlled and this in large measure makes or mars the product. This education is better adapted to his needs when it emphasizes the things of the spirit and lays stress upon the study of mankind as well as that of the genus homo.

ORATION IN SURGERY

THE PRINCIPLES OF THE TREATMENT OF FRACTURES

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The principles of the treatment of fractures are those fundamentals which do not, or at least should not, change with the passage of time. They were well recognized by the ancients, but nowadays are sometimes buried and overlooked beneath piles of chromium plated splints. The object of the treatment of fractures is to restore the patient to normal in as short a time as possible. Stripped to its essentials, the local treatment of a fracture consists of replacing the bones in their proper position and holding them until union occurs. The problem is seldom so simple as this, however. In order of importance, we must consider, first, the life of the patient; second, the life of the injured member; third, the function; and fourth, the form of this member. All four of these objectives may be reached only by adhering to the line of fundamental principles. Modern mechanical devices are of great assistance and no one appreciates their value more than I. But they are worse than useless unless applied with a full understanding of the basic principles. "It's the doctor behind the splint, and not the splint that counts."

Hippocrates, twenty-five centuries ago, used all the mechanical devices at his disposal but with far greater appreciation of the fundamentals than we sometimes see today. In speaking of reduction by traction, he says, "For the most part, two men will be sufficient, by making extension in opposite directions, but, if they are not sufficiently strong, it is easy to make more powerful extension in the following way: having fixed in the ground either the nave of a wheel, or any such object, something soft is to be bound around the foot, and then some broad thongs of ox-skin being brought around it, the heads of the thongs are to be fastened to a pestle or any piece of wood, the end of which is to be inserted into the nave, and it, the pestle is to be pulled away, while other persons make counter-extension by grasping the shoulders and the ham. It is also sometimes necessary to secure the upper extremity otherwise: this if you desire to effect, fasten deeply in the ground a round, smooth piece of wood, and place

the upper extremity of the piece of wood at the perineum so that it may prevent the body from yielding to the pulling of the foot, and moreover, to prevent the leg while stretched, from inclining downward; some person seated at his side, should push back the hip, so that the body may not turn round with the pulley, and for this purpose, if you think fit, pieces of wood may be fastened about the arm pits on each side, and they are to be stretched by the hands, and thus secured, while another person takes hold of the limb at the knee, and aids in thus making counter-extension. Or thus, if you prefer: having bound other thongs of leather about the limb, either at the knee or around the thigh and having fastened another nave of a wheel in the ground above the head, and adjusted the thongs to some piece of wood adapted to the nave, extension may thus be made in the opposite direction to the feet. Or if you choose, it may be done thus: instead of the naves, lay a moderate sized beam under the couch, and then having fastened pieces of wood in this beam both before and behind the head, make counter-extension by means of thongs, or place windlasses at this extremity and that and make extension by means of them. There are many other methods of making extension." For instance, the Father of Medicine made use of ordinary ladders placed beneath or alongside the patient to provide points of traction and counter-traction. He says, however, "If then, extension by means of men be sufficient, we should not have recourse to any useless contrivances, for it is absurd to employ mechanical means when not required; but if extension by men be not sufficient, you may use any of the mechanical powers which is suitable."

The application of the principles of treatment should begin as soon as a fracture occurs and before the patient is moved. In other words, "Splint 'em where they lie." Intense educational programs have been carried on by the fracture committees of the American Medical Association, the American College of Surgeons, and their subsidiary organizations, urging proper first aid treatment, and the subject is stressed in all publications on fractures. Despite this, we find this first of all the principles, seriously neglected by the profession at large. Those who come in contact with large numbers of fractures see frequent instances of patients who have been transported for miles without splints of any kind, after having seen a doctor. There is ample evidence that our police and fire departments, our Boy Scouts and our industrial and Red Cross first aid crews are caring for this phase of

the fracture problem better than the profession at large. There would seem to be little excuse for this state of affairs.

In all fractures there is injury, not only to the bone, but to the soft parts around that bone, caused by the fracturing force or by the rough ends of the fragments. Unless immediate measures are taken to fix the fragments, they cause further damage as their jagged ends move about in the tissues, tearing muscles, fascia, nerves and blood vessels, each time the limb is moved. We frequently see simple fractures converted into compound ones, or large vessels lacerated during transportation. This soft tissue damage, with its associated pain, cannot help but increase traumatic shock. Traction is essential as part of the first aid splinting of long bones. We know that there is a latent period of from 20 to 30 minutes following fractures, during which time there is local tissue shock. The muscles are flaccid and swelling has not yet taken place. After this time spasm occurs. The traction splint applied during this latent period will prevent overriding and maintain the length of the extremity, and will frequently restore the length even after reactive spasm has set in. It is not unusual to see badly displaced fractures reduced to good position during transportation to the hospital in a properly applied traction splint. Traction should be applied to compound as well as simple fractures, even though this means drawing protruding bone ends beneath the skin, since exposure and cleaning of the bone will be carried out later during the course of debridement.

A sterile dressing should, of course, be applied to all compound wounds. Once applied, the traction splint should not be removed until the X-rays have been taken and the fracture is ready for permanent treatment. I have seen splints removed in hospital emergency rooms and subsequent transportation of the patient, to and from bed, the X-ray table and the fracture room, carried out without protection.

The most effective forms of traction splints are the Murray-Jones hinged Thomas splint for the upper extremity and the Keller-Blake hinged half-ring Thomas splint for the lower extremity. These should be carried in the cars of all physicians. In the absence of one of these splints, effective traction splinting can be improvised by the physician if he displays but a particle of the ingenuity possessed by Hippocrates in devising equipment from whatever is at hand. His methods would be far superior to ordinary board splits applied without traction.

It is not necessary to establish a definite diagnosis of fracture before applying traction splinting. The mere suspicion is sufficient. It is far better to splint a normal limb than to neglect a fracture. After the splint has been properly applied, appropriate measures should be taken to combat shock before transportation is begun. It is not commonly realized that every move of severely injured persons, such as lifting from the stretcher to the X-ray table, causes a drop of several millimeters in blood pressure.

Just a word about fractures of the spine. Intelligent transportation of compression fractures of the spine is even more important than in injuries of the extremities. Flexion of the spine, when the patient is being lifted or moved, may sever an undamaged spinal cord. Kennedy, in Scudder's text says, "Death or permanent disability results more commonly from improper transportation of fracture of the spine, sometimes unrecognized, than from any other injury, and, 'If the mechanism of injury is such that a fracture of the spine might have been produced, treat as a fracture, even though no objective signs are made out in a cursory examination.'"

Hyperextension is the principle to be applied in moving such a patient. The best method is to slowly and gently roll him onto his abdomen on a blanket which, when lifted, forms a hammock, allowing the spine to sag into hyperextension. Further transportation should be on a rigid stretcher with support beneath the pelvis and the head and shoulders, still face downward. He must never be allowed to sit up or otherwise flex the trunk forward. Patients with injury to the cervical spine should be transported on their backs with the head and neck rigidly fixed in extension.

After transportation to the doctor's office or the hospital, where permanent treatment is to be carried out, a more thorough examination may be made. First, a history and general physical examination. Does the patient have other injury, such as a ruptured spleen or bladder, or intracranial damage which may take precedence over the fractured limb? Should further treatment for shock be carried out before attending to the fracture? If so, the properly applied first aid splint will maintain the bones in favorable condition while these matters are attended to. Will the patient's age, cardiac and respiratory apparatus, or metabolic functions, his social and economic status, necessarily influence or restrict our method of treatment? With these things in mind, we may continue with a more detailed phys-

ical and X-ray examination of the injured limb. If someone else has administered first aid, we must determine if the fracture is compound, if the peripheral pulses are present and the nerves uninjured. For self-protection it is wise to note and record vascular or neurological damage before undertaking any manipulation. Clear X-ray films should be taken in two planes and carefully inspected. It is not unusual for a second injury to be overlooked in X-ray films, such as dislocation of the head of the radius, when one's attention is focused on an obvious fracture of the ulna. With present day transportation, office and hospital equipment there is little excuse for treating any fracture without X-ray control and "Juries are awarding damages for failure to take X-ray pictures of fractures. Take X-ray pictures usually before and always after reduction of all fractures."

With this information evaluated, we may consider permanent treatment. Stimson says, "Next in importance to the evaluation of the patient is the form of treatment for which the doctor is best equipped. Is he working alone in a small town with limited assistance and equipment, or is he working in a large hospital with trained personnel and a smoothly running organization?" Hippocrates recognized the fact and necessity for different methods in different localities, for he says in discussing methods of reduction, "But the best thing is, for any physician who practices in a large city, to have prepared a proper wooden machine, with all the mechanical powers applicable in cases of fractures and dislocation, either for making extension, or acting as a lever."

The same principles of treatment, however, apply, no matter whether carried out in a Greek village 2500 years ago, or in an American metropolis today. Permanent reduction must be carried out as soon as possible after the injury. Each hour of delay increases the difficulty of replacing the bones. Malposition and overriding cause compressing and kinking of arteries, veins and lymphatics. This results in increased swelling which may persist until normal position is obtained. The surest way to prevent and reduce swelling is to reduce the fracture. There is no place in modern fracture treatment for the practice of waiting for the swelling to go down before reducing the fracture. Even though manual manipulation may be contra-indicated, traction should be applied to restore the natural course of the blood and lymph vessels. Full anesthesia, either local or general, is necessary and should be instituted before removing the first aid splint. It is used not only for humani-

tarian reasons, but because it relaxes the tense muscles and permits reduction to be carried out more gently and easily.

The prime principle in the reduction of fractures of the extremities is traction with, of course, adequate counter-traction. Reduction of fractures of long bones by increasing the deformity, by angulating them, engaging the ends and using the fragments as levers, is a barbarous practice which originated in the Dark Ages and would have been disdained by Hippocrates as being crude and unscientific. This applies particularly to the common practice of "breaking up the impaction" in Colles fracture, forcibly increasing the deformity by hyperextension. This procedure crushes and destroys additional bone on the dorsum of both fragments, leaving a wedge shaped gap which does not fill in and which results in a dorsiflexion deformity. Proper axial traction will gently and easily break up such an impaction without causing additional destruction of tissue.

Traction may be applied in many ways, mechanically by skin or skeletal means, or in simpler cases, manually. As to manual traction, Magnuson says, "The object of traction is to pull the fragments into line. This must be done by steady, slow, nonvibrating traction. Of my students I often ask the question: 'Which is the stronger, a railway fireman or a railway doctor?' Yet I have many times seen a doctor whose muscles are not 50 per cent as strong as the muscles of his patient, trying to reduce a fracture with his own hands without any form of mechanical contrivance to help him. Traction by the hands of the operator cannot be steady. No matter how strong he may be, his muscles tire and pass from tonic contraction into clonic contraction, and clonic contraction is jerky. Also, manipulation using force by the hands alone interferes with the sense of touch in the operator's fingers, and makes him less able to determine the position of the fragments." Hippocrates recognized these facts, for nowhere does he advise traction by the hands of the operator. When manual, rather than mechanical traction, is to be used, he advised "Two strong men," for traction and counter-traction, leaving the operator's hands free for the more delicate adjustment of the fragments.

Traction stretches out the spastic muscles and corrects the overriding of fragments by restoring the length of the limb. Transverse displacements are largely corrected by the squeezing effect of the tautened fibromuscular tube in which the bone lies, aided by appropriate external press-

sure. Hippocrates again gives the rule "The axle, the lever, the wedge, pressure above: the axle to separate, the lever to push aside. Reduction and adjustment are to be accomplished by forcible extension, the parts being placed in such a position as will facilitate the conveying of the displaced bone over the extremity of the bone from which it was displaced: this is to be accomplished either with the hands or by suspension or axles, or turned around something. With the hands this is to be effected properly, according to the structure of the parts. In the case of the wrist and elbow, and the elbow with the forearm at a right angle with the arm, as when it is suspended in a sling. When we want to separate the protruding bones, and force them into place, in the case of the fingers, the toes or the wrist, the proper separation may be made by hands, while the projecting part is forced into its place by pressing down with the heel or the palm of the hand upon some resisting object, while something moderately soft is laid under the projecting part, but nothing such under the other, and then pressure is to be made backward and downward, whether the dislocation be inward or outward. In lateral displacement, pressure and counter pressure must be made on the opposite sides."

The principles of the correct line of traction are extremely important in correcting not only shortening but rotary and angular deformities. This principle is that "The fragment which can be controlled must be brought into alignment with the fragment which cannot be controlled." Ordinarily, this means bringing the distal fragment into line with the proximal one whose position is determined by the muscles attached to it. Application of this principle requires an intimate acquaintance with the origins, insertions and relative strength of the muscles acting on the fragments. For instance, in fractures of the shaft of the femur, the proximal fragment is usually abducted, rotated outward and flexed on the pelvis. The distal fragment is adducted and flexed on the leg. The degree of those deformities is determined by the site of the fracture, whether high or low. Each fragment rests in the position of muscle equilibrium, according to the power of the opposing rotators, adductors, abductors, flexors and extensors acting upon it. Traction must be applied in the line of the fragments in their position of equilibrium. In the shaft of the femur this requires the proper angle of flexion at the hip and knee according to the site of fracture, with the

distal fragment abducted and rotated into line with the proximal. Hippocrates again has laid down the principle of the correct line of traction and his instructions, particularly in regard to fractures of the upper extremity, would put many surgeons of the 20th century to shame.

The amount of traction necessarily varies with each patient and each bone. Obviously, it requires more pull to tire the muscles of the thigh than of the forearm and more force to reduce a fracture in a husky coal miner in Harlan than in a frail, elderly maiden lady in Louisville. Magnuson states "sufficient weight should be applied within the first few hours to tire the muscles completely and to bring the fragments into alignment. It is much better to use a large amount of weight for the first few hours than to continue to add weight for a period of days, while the induration around the fracture increases and the muscles become thick and hard. If a large amount of weight is necessary, it should be added 10 or 15 pounds at a time, in the case of a femur up to 80 to 90 pounds. Additional weight should be put on at ten-minute intervals to prevent overloading the muscles and thus causing a reaction or spasm. This also assists in the determination of the amount of weight necessary to tire muscles in any given fracture. Almost any fracture can be brought into alignment with a sufficient amount of weight applied for the first twelve hours; whereas, if allowed to remain in malposition for several days, in many cases no amount of weight will bring the fragments into apposition and alignment." Hippocrates says "The extension should be most powerful when the largest and thickest bones, or when both are broken; next, when the under bone and least of all when the upper. When immoderate, it is injurious, except in the case of children. The limb should be a little elevated. The model by which we judge if the part be properly set, is the sound part of the same name, or the part which is its pair." Skeletal traction is more efficient than skin traction and requires only about half as much weight. In applying traction, the proper principles of alignment and amount of traction are of more importance than the methods employed.

Following reduction by traction (or by hyperextension in the case of the spine,) aided by appropriate manipulations, we must turn attention to maintaining the fragments in proper position until healing occurs. For, "all the bones get consolidated more slowly, if not laid properly, and if not

kept steady in the same position." Boehler says, "The fixation of the fracture after accurate reduction, which must continue until the occurrence of bony union, may be carried out in different ways. The constant pull of the muscles and the action of gravity always tend to cause fresh displacement of the fragments, particularly if the surfaces of the fracture are oblique, or comminuted. In these types of fracture, the correct position of the fragments cannot be retained by splints made of wood, metal or plaster. For many fractures, particularly those of the femur, the best method is continuous traction applied directly to the bones by means of nails, tongs, or taut wire. A recent device is the application of nails or wire to the central and peripheral fragment, the limb being covered by unpadded plaster of paris. In this manner, the fragments of the fracture after accurate reposition, are fixed to the plaster cast, and any movement is impossible. . . . The results to be guarded against, in any fracture, are shortening, bending, distortion, stiffness of the joints, atrophy of the muscles, chronic swelling. Shortening, angulation and deformity can be prevented if the rules for fracture treatment are followed, if the fragments are properly replaced and held in position until firm union has occurred. Whilst it is comparatively easy to correct the displacement of many recent fractures, the lasting fixation of the same in correct position is often difficult. With no one single method of treatment, plaster, splints, traction, massage, passive or active movements, is it possible to achieve the desired result. The type and situation of the fracture, the constitution and age of the patient, and the conditions under which the surgeon has to work, all demand special modifications of the treatment. With each method of treatment is it possible, if it is applied at the right place, at the right time, and in the right manner, to produce good results. No method, therefore, should be set aside or condemned."

According to the exigencies of the case, or the individual preference of the surgeon, he may elect to maintain position by continuous traction or by external fixed dressing. With either method elevation of the injured extremity is an essential principle well recognized by the ancients but often neglected. Lifting the limb above the level of the body assists circulation by accelerating the venous and lymphatic return flow. This prevents further swelling and, next to proper reduction, is the most important factor in reducing that which has already occur-

ed as a result of the original trauma. In connection with traction, elevation by suspension allows movement of the patient in bed without disturbing the fragments. If continuous traction-suspension is used, constant inspection and supervision of the amount and angle of traction must be carried out. The weight used for traction should be reduced sufficiently to prevent over-extension and to allow firm contact of the fragments, since distraction may cause delay or failure of union. Sufficient pull must be maintained, however, to prevent longitudinal or angular displacement. Counter-traction is maintained by the weight and friction of the patient's body on an inclined bed, or by other appropriate means. The limb must be maintained in proper position and muscle equilibrium, by constant care and readjustment of the apparatus. Frequent observation must be made to detect undue constriction or pressure on the soft tissues.

If an external fixed dressing is elected, it may consist of metal or wooden splints or plaster of paris. The dressing should be of such character that it adequately immobilizes the fragments but does not unnecessarily restrict any joint. In many fractures of the shafts of the long bones, this means immobilization of the joints immediately above and below the fracture, particularly in those cases involving the forearm or the leg. The cast or splint should extend far enough beyond the joint to get good leverage on the limb and prevent the end of the dressing from cutting into the soft parts. If splints are used, pain should be taken to avoid concentrated pressure points, particularly over bony prominences. Here, the Father of Medicine again tells us, speaking of the forearm, "Particular attention should be paid to the line of the arm corresponding to the thumb, so that no splints should be applied in these directions nor in the line of little finger where the bone is prominent at the wrist, but on each side of it. And, if it be found necessary that splints should be applied in these directions at seat of the fracture, they should be made shorter than the others, so that they may not reach the bones which are prominent at the wrist, for otherwise there is danger of ulceration, and of the tendons being laid bare."

The plaster cast is today the most generally used fixation dressing. It is easily applied and can be made to fit each individual extremity with smoothness and accuracy impossible to obtain by other means. Here again, we are but imitating the Greek

school, for Hippocrates used casts made of bandages impregnated with wax and gave explicit directions for their application. The plaster should be applied evenly and snugly but not tightly, and should be smoothly and accurately molded, especially over bony prominences. No indentations or localized areas of pressure are permissible, or necrosis will occur. Smooth molding over the bones will evenly distribute pressure and tension from the muscle pull and prevent pressure sores. In almost all cases, proper elevation of the injured extremity before and after reduction will prevent dangerous circulatory disturbances even in fresh fractures. Severe soft tissue injury or neglect of elevation may cause excessive pressure within the cast at the site of the fracture. A vicious circle is then established. Swelling causes pressure which obstructs the venous and lymphatic return flow, thus leading to more swelling. The only remedy is immediate splitting of the cast throughout its entire length. Partial splitting distal to the fracture, is useless. The signs of pressure in the order of their appearance in the toes are: (1) edema, (2) cyanosis, (3) loss of sensation and (4) impaired motion. Edema and cyanosis may be treated by elevation and careful observation. Inability to wiggle the toes, and loss of sensation, however, are immediate indications for splitting of the cast, as is excessive pain at the site of the fracture.

Schneck says, and quite truly, "As long as localization of the part touched is possible, the circulation can be considered adequate." If circumstances are such that the patient with a fresh fracture cannot be observed every six hours for the first day, the cast, whether padded or not, should be split in anticipation of trouble.

A properly reduced fracture which is correctly immobilized should be painless. Any complaint of pain, therefore, should lead to immediate investigation to determine and remedy its cause. This includes checking the position of fragments, the circulation, and nerve supply of the part and all possible areas of undue pressure from the apparatus.

No general rules can be laid down for the time of removal of fixation dressings. This varies with each fracture and depends upon the age and general condition of the patient and the local conditions at the site of injury. Fractures caused by violent crushing forces, such as the modern automobile, heal much more slowly than those accompanied by less soft tissue damage.

During and following the period of fixation, our attention must be directed toward securing functional recovery. As soon as

possible after fixation, the patient is instructed in active functional exercise of the part. In injuries of the upper extremity this may be done advantageously before the local anesthetic has worn off. The patient should be taught to completely open and close the fist, button his clothing, write, light cigarettes, sweep or do other exercise appropriate to his habits or occupation. The active exercise aids considerably in preventing and reducing swelling at the fracture site. No sling is used for fractures of the forearm, as this limits motion. In some severe fractures, elevation above the body level may be necessary for twenty-four to seventy-two hours to diminish swelling. Patients with fractures of the lower extremity are taught and encouraged to bear weight as soon as the cast is hard enough, usually forty-eight to seventy-two hours in simple fractures. Active use diminishes swelling, but frequently elevation is essential for the first week when the extremity is at rest. Adults may start with cane or crutches, according to the magnitude of the cast and their self-confidence in balancing.

Many children, being more fearless, may need no extra support from the start. Proper instruction and encouragement are important, since many patients with hearsay knowledge of other methods are fearful that use or weight bearing may cause displacement. This fear may be easily overcome by proper instruction and encouragement. The psychic effect of transforming an incapacitated, injured patient at once into a healthy person with a bandage on his limb has a favorable influence in preventing the compensation neuroses.

The continuous active motion of normal use is natural physical therapy and, being continuous, is superior to any artificial and intermittent type, whether active or passive. During exercise and walking, the muscles and tendons move easily in their sheaths without pain from the firmly fixed bones. Fascial planes slide over one another in the natural manner. Even those muscles whose origins and insertions are so fixed in the cast that they cannot approach each other, undergo contraction and relaxation with each step or each active motion of the extremity. In a case of Pott's fracture for example, only the anterior and posterior tibial and the long and short peroneal muscles have their origins and insertions fixed, but even these contract and relax with their neighbors when the limb is actively used. The fact that a muscle may be exercised by active contraction without actual shortening of the muscle or motion of the point has been recognized for a long time and is taken

advantage of in "muscle-setting" exercises. The continuous exercise obtained by active functional use is obviously more natural and effective than the intermittent artificial type. The pumping action of contracting and relaxing muscles maintains normal flow of blood. This, to a large degree, prevents atrophy and subsequent edema. Normal nutrition and the absence of stasis hasten healing of the fracture, as does the mild intermittent pressure on the fracture surface. The ability to use the extremity without pain tends to prevent the disabling joint stiffness so common after immobilization. This limitation of motion is caused, not so much by lesions within the joint, as by gluing together of the muscles, tendons and capsular fasciae surrounding the joint. When the extremity enjoys full functional use during the period of immobilization, these tissues are well-nourished and free and supple when the fracture is healed. Even the joint capsule and synovia enjoy painless motion with each step, notwithstanding the fact that the bones making up the joint do not move to any perceptible degree.

In cases treated by traction-suspension and in some cases treated by splints or casts, complete active function during fixation is impossible. We must, therefore, use other methods of physiotherapy to maintain circulation and muscle tone and to prevent atrophy of tissue and stiffness of the joints. Properly conducted massage and external heat relaxes muscles and improves circulation and paves the way for supervised active movement of muscles and joints. "Breaking up adhesions" under anesthesia is almost never necessary. Passive motion should be used guardedly and never forcibly. Here, as in the active functional method of treatment, the complete cooperation of the patient is essential. Scudder says, "The power to heal is the property of the living tissue, but the power to recover function, the use of muscles and joints, is the property of the patient's will." One has only to compare the speed of recovery of function in compensation cases with that in non-compensation cases, to appreciate this truth.

In conclusion, I can do no better than to urge those of you who are interested in fractures, to go back 2500 years and read Hippocrates. It is not only a pleasant study, but in practical value compares favorably with many writings of today. Close adherence to his principles, whether with crude equipment or our shiny, streamlined 20th Century gadgets, will insure good results, but neglect of these fundamentals makes our gadgets just so many pounds of chromium plated junk.

ORATION IN MEDICINE

INFECTIONS AS THE ETIOLOGICAL FACTOR IN HEART DISEASE

E. B. WILLINGHAM, M. D.

Paducah.

I can think of no reason why I should have been honored with this much coveted place on the program, except that it has been earned by long and continued loyalty to organized medicine. I have made an attempt to show my appreciation by selecting a subject highly controversial but of vital interest to all doctors. "Infections as an Etiological Factor in Heart Disease" has been an obsession with me for several years. To show that it is important to patient and doctor alike, I am taking the liberty of quoting from various authorities, with opinions for and against this theory. I want to draw your attention to the significant fact that these several writers on the negative or doubting side admit it may play a part in the chronic as well as the acute organic heart diseases.

As Halsey of New York has said, "Etiology in heart disease has pervaded the professional mind as a necessary factor;" and its importance as well as its development from the long past is well presented by him in an article in the A. M. A. Journal, 1932,

(Quote) "While the knowledge of cardiac mechanics was insinuating itself into common medical practice there was a great lapse of time which today one cannot realize. It has taken many centuries to arrive at our belief that nothing happens without there being some cause for it.

A few moments will suffice to recall some of the relatively important steps in the evolution of the etiologic point of view which has so slowly "crept on apace."

In 1858, Rudolf Virchow (1825-1901) showed that the essential changes of diseased tissues were modifications of the normal cells of the body and not an invasion of extraneous cellular organisms, and cellular pathology began.

Pierre Carl Edouard Potain (1825-1901) developed the knowledge of acute and chronic heart disease and its relation to rheumatic fever.

Louis Pasteur (1822-1895) proved the bacterium to be the pathogenic agent in disease.

The final aim of medicine is to acquire a knowledge concerning etiology and concerning the consequent development of the morbid process so as to be able to adopt the right line of action.

It is now within the power of the practi-

tioner of medicine to produce more knowledge and to shorten the time when it will be possible to know definitely the size of the problems of diseases of the heart.

There are three reasons of great importance alike to the patient and to the physician why the etiology of the heart damage should be determined; first, therapeutic, second, prognostic, and third, prophylactic.

At present the practicing physician considers etiology in what may be characterized as three different languages; the statement of the pathologist, the nomenclature of the International List of the Causes of Death, and the modern clinical diagnosis. These three experiences can and should be written in the same vernacular with increasing accuracy of form and definition. It is not as difficult as it may seem.

These three points of view and the possibility of making them contribute to the knowledge of etiology, as well as to the more accurate estimate of the elements of what is heart disease, seem sufficiently important to merit discussion at this time.

To prevent the damage of a healthy heart it is essential also to learn the way to prevent the transmission of the infecting agent.

The etiologic point of view has required centuries to develop but it now pervades the profession." (End of quote)

On the negative side Paul D. White says, "Infections and poison have not been shown to have any close connections with the pathogenesis of hyperpiesia atherosclerosis or metabolic changes in the cardiovascular wall which can progress to extensive calcification. It may cause heart disease and embarrassment if it involves two particular parts of the circulatory system. First, the coronary arteries to an extent seriously to limit the blood supply to the myocardium or second the endocardium to a sufficient degree to cause valvular stenosis. Even though in a general sclerosis unless it involves the coronary artery elasticity it does not detract from the efficiency of the circulation."

Etiology: The cause of the heart disease is known, high blood pressure, but the cause is unknown it has been called "essential" and many theories have been built up to explain it.

The hypertension that gives rise to hypertensive heart disease is not associated with any constant clinical findings, and because its cause is unknown it has been called "essential" or "primary." The term hyperpiesia has also been applied to it and another synonym is vascular or arterial hypertension, indicating that the blood vessels are responsible. Since a single word is convenient and hyperpiesia does not commit it to any one

theory, it appears to be the most suitable designation, at least until the cause is known.

Innumerable theories as to the cause of essential hypertension or hyperpiesia have been advanced since its discovery a generation ago. It is unprofitable even to attempt to name them. Suffice it to say that the most acceptable and widely held theory in the light of our present knowledge is that for reasons unknown the arterioles more or less universally throughout the body have become irritable and pass into a state of more or less constant vasoconstriction, thereby increasing the resistance to the circulation of blood, to which the heart responds, with a resulting rise of arterial blood pressure.

Pathology: The pathology of hypertensive heart disease is as a rule very simple. Both cardiac and vascular abnormalities in chronic hypertension are primarily but natural responses of muscle to increased work. Hypertrophy of the individual muscle fibres of the left ventricle is always present, sometimes to such a degree that the heart is greatly enlarged.

There is no actual myocarditis or myocardial degeneration in many cases of uncomplicated hypertensive heart disease even in massive hearts with marked congestive failure; some myocardial scarring (fibrosis usually in small areas) is, however, not uncommon, even in the absence of coronary disease. Endocarditis and pericarditis do not occur primarily in this type of heart disease, although endocardial sclerosis, most marked in the left auricle, was found in all of a series of 27 hypertensive hearts by Levine in 1934.

Thickening of the arteries and arterioles throughout the body is a common finding with chronic hypertension and in all probability is a vascular response to the hypertension. Arteriolar sclerosis and obliteration may complicate the picture. Hypertension without arteriosclerosis and arteriosclerosis without hypertension are frequent findings, but the two combined are as frequent as either condition alone." (End of Quote).

Dr. Harry Goldblatt, Cleveland, Ohio, in experiments made by him and his collaborators produced high blood pressure resembling human essential hypertension in dogs and monkeys by means of a special clamp constricting the main (renal) arteries carrying blood to the kidneys. Medical treatment or surgical operations were tried on such animals but would not affect the blood pressure. This shows that the basic cause of the condition was not affected. When there was a tight constriction of the arteries to both kidneys, the excretory function of the kidneys was reduced and inflammation and degeneration began as in the case of essential hypertension in humans. What the nature of the

responsible chemical substance is, how it is formed, and exactly how it acts is not known. His conclusion is that a humoral mechanism of renal (kidney) origin is responsible for the increased peripheral resistance that determines the elevation of blood pressure. He states that constriction of arteries supplying other organs is not followed by hypertension.

Quoting Boyd, pathologist, on arteriosclerosis, (Quote) "Of all arterial lesions arteriosclerosis is the most common, the most important, and the most obscure. Not only is the cause unknown but the very nature of the condition is undecided, by some being regarded as inflammatory, as indicated by Virchow's term *endarteritis deformans*, by others as a degeneration. One reason why a perusal of the discussions in the literature is so confusing is that a number of different lesions are included under the name of arteriosclerosis, so that now one, now another condition is being alluded to. It is not really a disease but is rather what Clifford Allbutt calls an omnibus name including several main divisions, the anatomical result of several morbid processes.

Etiology and Pathogenesis: In discussing the cause of arteriosclerosis, Clifford Allbutt remarks that "our path is cumbered with guesses, presumptions and conjectures, the untimely and sterile fruitage of minds which cannot bear to wait for the facts, and are ready to forget the labor of verification." Almost everything has been blamed, and it is impossible to review all the suspected causes. It is regarded as a disease of old age, a consequence of that vague thing called the wear and tear of life. But in many old people there is no trace of atheroma, and marked atheroma may be found in the young. It seems more likely that, as in the case of malignant disease, the advance in years merely permits some slowly acting cause to produce its effect on the vessels.

It seems probable that bacterial toxins circulating in the blood may produce degenerative changes in the intima. The acute infections such as typhoid and influenza are most probably followed by such intimal changes. The difficulty is to understand how such lesions should acquire the progressive character of atherosclerosis, a low-grade infection of more chronic character is more likely to be the culprit. More than this we cannot say." (End of Quote)

In a paper read before the American College of Physicians in 1929 David Riesman pointed out the inadequacy of the term Myocarditis, especially when it is used in describing the cardiac diseases of middle life. Many of the conditions seen at this age period

are the result of either beginning or advancing senescence. Originating in the changes that occur in the blood vessels, an entire series of physiologic events takes place which renders the myocardium insufficient. The heart failure that results involves no inflammatory reactions and must be sharply differentiated from those types which pass through the pathologic changes associated with or dependent on acute or chronic infectious disease.

The role played by myocarditis of the youthful heart in predisposing toward myocardosis of the elder one, remains one of the problems in cardiovascular disease still to be investigated.

Bacterial Invasion of the Blood by Ottenberg, *American Journal of Surgery*, 1934, explains some of the mysteries regarding different bacteria, their habits, chronicity and their power to perpetuate their continuous presence in the host. It is an answer to some of the open questions notated previously. (Quote) "There are two general methods by which bacteria penetrate the blood stream: (1) lymphatic drainage from local lesions; and (2) direct invasion of blood-vessel walls usually with production of lesions of the vascular endothelium.

Each method is characteristic of certain bacteria. There are some organisms which according to circumstances may invade the blood stream by either method. In many instances the exact mechanism of the original blood invasion can no longer be determined but the bacteremia is kept up by a secondary focus within the vascular stream such as an endocarditis or thrombophlebitis.

Thus the hemolytic streptococcus when found in the blood is usually being fed into it either from a thrombus or other endovascular lesion. But in some conditions, as for example erysipelas, it may enter the blood stream by the lymphatics.

The original mode of entry of the non-hemolytic streptococcus is not clear. It is believed to reach the blood stream from some indolent chronic focus of infection such as paranasal sinuses, tonsils, periodontal tissues. But when found in the blood in sufficient numbers to be cultured it almost invariably is being supplied to the blood stream by infected heart valves.

SEARCH FOR THE DISTRIBUTING FOCUS

In the study and treatment of blood stream invasions it is important to distinguish between:

- (1) The portal of entry, which does not necessarily remain permanently a point of distribution;
- (2) The focus of distribution, adjacent to or within the vascular stream;
- (3) Metastatic foci most of which, as

Libman's studies show, seldom act as distributing centers for the blood stream.

It is often extraordinary to what extent recovery can take place from secondary, or metastatic foci due to the streptococcus, staphylococcus, pneumococcus or gonococcus, provided the distributing focus is removed. From the practical and especially from the surgical point of view, therefore, it is the discovery and treatment of the distributing focus which is important." (End of Quote)

A further study of the infecting bacteria and the tissue pathology in the heart that results from rheumatic fever is well presented by Fishberg in his book on heart failure, published in 1937.

(Quote) "Studies by Swift, Talalajew, Klinge, and others have shown that in rheumatic fever there is implication of the connective tissue throughout wide areas of the body if not universally.

The morphological changes seem to be fundamentally similar in all parts although their form is modified by the terrain in which they develop. It seems probable from the researches of Swift and others that the lesions are the morphological expressions of an alteration in the reactivity of the mesenchymal tissues resulting from sensitization of the organism to the etiological agent. The nature of the latter, whether streptococcal or not is still sub judice and will not be discussed here.

In this rheumatic process the connective tissue of all the structures of the heart—endocardium and valves, myocardium, pericardium, and coronary vessels—is involved with varying intensity.

While it has long been known that rheumatic infection may produce lesions of the coronary arteries, the frequency and severity of the latter have become evident only in recent years. Investigations by Karsner and Bayless and Gross, Kugel and Epstein have shown that the coronary arteries are regularly implicated in rheumatic heart disease, although the severity of the changes and the number of branches involved varies. In patients succumbing during active rheumatic infection, some of the coronary branches generally reveal arteritis, characterized by such changes as cellular infiltration, proliferation of fixed cells, edema, eosinophilic swelling of the collagen, necrosis, destruction of the elastic tissue, and thrombosis. Most of the changes are not specific for rheumatic infection, but sometimes Aschoff bodies are found. The arteritis may affect coronary branches of all sizes. According to L. Gross, Kugel and Epstein, the severe forms of rheumatic arteritis almost always occur under the age of fifteen years. H. Gross and Oppenheimer

found no evidence in their clinical and necropsy observations that rheumatic infection predisposes to coronary arteriosclerosis of a severity sufficient to be striking at necropsy. On the other hand detailed histological studies by Karsner and Bayless and L. Gross, Kugel and Epstein have shown that long standing rheumatic heart disease favors the development of regressive changes in the walls of the coronary arteries. In rheumatic heart disease of long duration, the last named investigators found premature sclerosis and thickening of the coronary arteries due to elastic and collagenous hyperplasia; their findings indicate that the victim of chronic rheumatic heart disease has coronary arteries belonging to an age period considerably older than his actual years. Thus, L. Gross and his co-workers mention a patient, aged fifteen years, in whom the right circumflex coronary artery had an intima of the thickness usually seen in the fourth decade of life. It remains to be determined to what extent the thickening of the coronary arteries in rheumatic heart disease is a manifestation of increased wear and tear due to the greater blood flow required for the hypertrophied heart, and to what extent it is due to organization of the arteritis of the active stages. Probably both factors participate.

Thrombotic occlusion of small coronary branches is a common result of rheumatic arteritis. Nor are mural thrombi of the large branches rare. However, major coronary thrombosis with occlusion of a large branch and the clinical picture of myocardial infarction is a great rarity." (End of Quote.)

The proof of numerous bacteria which penetrate the blood stream and set up definite tissue pathology, as outlined by Ottenberg and Fishberg are the probable primary defects necessary to precipitate reduced coronary circulation and lack of nutrition of the heart muscle from which it suffers in heart failure.

Hampton Lawson, Louisville, in an article in the *Journal* in 1938 in a practical discussion of the metabolism of the cardiac muscles has offered conclusive evidence of the proof of the foregoing statement:

(Quote) "The adjustment of the metabolism of the heart to the amount of work it is required to do is a nice one. Starling showed in 1915 that within limits an increase in the resting or diastolic length of heart muscle fibers is accompanied by an increase in the mechanical work done during contraction. Simply stretching heart muscle has been shown to increase its oxygen consumption. This is probably the chief mechanism which permits adjustment of metabolism to work required. There is no experimental evidence

that the failing heart fails because of insufficient energy liberation. It fails because the energy which it liberates cannot be converted into mechanical work. It is useless on the basis of what is known to attempt to improve cardiac efficiency by supplying the heart with more fuel, or with fuel which is more readily utilizable, since the cause of heart failure is probably never found in this category. It is entirely rational, on the other hand, to improve the working conditions of the heart so that its already sufficient metabolism may result in the performance of greater amounts of work. Such an attack hits directly at the only condition in which the nutrition of cardiac muscle is likely to suffer, that is, reduced coronary circulation. The supply of blood to the heart muscle, rather than the energy value of the blood, is probably the limiting factor. The heart muscle is a machine for converting chemical energy into mechanical work." (End of Quote)

Apparently we are beginning to understand a few definitely proven facts, that the heart is a machine of work and its efficiency depends upon the normal supply of blood to its tissue. We are told that certain bacteria penetrate the blood stream and set up tissue pathology in the heart. This furnishes the primary injury, and one of the main factors causing disfunction in cardiac disease is the persistence of chronic infection, sometimes so mild as scarcely to be detectable, especially the rheumatic manifestations; since the degree of rheumatic activity varies in the low grade type from discontinuance to continuance.

An important fact is that with our laboratory equipment the clinician can locate the very early lesions inflicted in the heart by this infectious bacteria which can be followed through various phases of progress of healing by the use of the electrocardiogram.

That the electrocardiograph is not used as much as it should be in obscure illness is emphasized by the following statements by men of wide clinical observation.

Importance of the electrocardiogram in rheumatic fever by Lemuel C. McGee, Elkins, West Virginia, in the *Southern Medical Journal* May, 1938 states: (Quote) "Rheumatic fever, affecting as it does endocardium, myocardium and pericardium, theoretically can influence changes in any part of the electrocardiographic record. That it actually does this has been noted repeatedly. In 1924, Cohn and Swift, utilizing the fact that characters of form in the electrocardiogram remain rather constant for long periods of time in normal persons, made a systematic study of serial records taken in a group of 37 pa-

tients having rheumatic fever. In 35 of the patients there was evidence of damage to the heart. This was shown usually in one of three different ways:

(1) Changes in duration of the auriculo-ventricular conduction.

(2) Alteration in the ventricular complex affecting the QRS pattern, R-T interval or T-wave.

(3) Irregularities in the cardiac rhythm. McGee's study was prompted by finding an abnormal electrocardiogram in seven patients three to eight weeks before rheumatic fever was otherwise in evidence, that is, joint involvement or detectable endocarditis.

The findings in McGee's records from his fifty patients include abnormalities in height, with an uniformity of the P-wave; increase in the P-R interval of 0.03 second with comparable heart rates during observation, or a lengthening to 0.2 second or beyond; widening or slurring of the QRS complex; changes in the S-T intervals in the limb leads; and significant depressions or inversions of the T-waves. In but four of the entire group were detectable changes in the electrocardiographic records not found.

As has been well stated by Coburn, "the anatomical lesions of rheumatic disease develop when the disease manifestations are so mild that they fall below the horizon of clinical detection. With this apparent hindrance to the clinical diagnosis of active rheumatic infection in patients of the South, it is particularly important that the physician apply all available diagnostic aids in suspected cases. One of the overlooked diagnostic aids is the electrocardiogram. It is in rheumatic fever, as Lundy has said, "that the electrocardiogram serves one of the most important and most sadly neglected functions."

It is to be remembered that clinical electrocardiography is, in any instance, but an adjunct to diagnosis. The instrument gives a striking analysis of disturbances of rhythm, but no wave change is specific for any disease. The changes can be interpreted properly only by intelligently relating them to the actual clinical status of the patient from whom the record was taken." (End of Quote).

A well directed history beginning with children's diseases, a complete physical examination, repeated, rechecked and even serial grams over a long period of time may be necessary to negate or prove the infectious etiological factor in some cases. It is this sub-clinical group that has resulted in the lack of knowledge concerning the course of rheumatic cardiac infections without manifest clinical signs which if followed from childhood to old age will furnish the connecting link with acute heart infections and chronic

heart disease of the degenerative type, hyperpeisia and arteriosclerosis.

No doubt some just criticisms may be offered in that too much emphasis is being placed on the electrocardiogram as the pathognomonic criteria of a certain pathology representing an obscure condition like chronic rheumatic infection as there are other diseases which may produce similar deviations from the normal in the electrocardiogram. Notably the myxedema heart, showing prolonged PR interval, changes in the QRS complex, flattened inverted T-wave etc., which returns to normal under thyroid therapy. This is direct proof of functional pathology rather than organic. Likely edema or water retention in the cardiac tissues in certain sensitive areas of the heart muscle and conducting system with lowered cardiac muscle metabolism is the probable answer to this rather indefinite, unaccountable, condition. Many unaccountable influences, either local or remote, may affect the capacity of the myocardium for a normal physiological response. Serial grams in a patient over a long period are necessary to verify permanent tissue damage.

The pathology produced by toxic substances in the blood has long been under investigation as to their damaging effect upon the heart and cardiovascular system. Alcohol, tobacco and every food used by the human family has been investigated over and over, but none have been found to change or inflict the least pathological tissue destruction. Even the pernicious thyrotoxicosis which probably generally interpreted has the outstanding toxic substance that will produce hypertension and heart disease has withstood extensive investigation without being victimized as a primary factor in organic heart disease. Paul D. White states, "There is no constant cardiovascular pathology following thyrotoxicosis."

This has been proven even in my limited experience with this intoxication except when there is positive evidence by the history or if by previous examination there was some evidence of an infection, otherwise when the goiter or the cause of the toxic condition was removed, the heart would become normal with no residual electrocardiographic evidence of pathology.

Congenital defects and hereditary vessels undoubtedly are more vulnerable to infections and a history should be sought and evaluated in suspected cases.

A critical analysis of a few case reports will show a direct connection of acute rheumatic infections of the heart with the chronic organic degenerative heart diseases of the same pathological background. These cases notated in detail are selected from a group

of one hundred or more of my white, private patients who have been under observation from one to fifteen years, ages from thirteen to sixty-three. They have come to me because of heart complaints. These complaints are many and varied, but only a few are dependable as signifying tissue pathology. Pain over the cardiac area, short, fainty feeling, weak palpitating attacks coming on with exercise, fast pulse and slow pulse. Other cases usually referred by doctors discovered in a routine examination are high blood pressure, low blood pressure and murmurs. A significant fact is that I have been able by physical examination and history to locate the primary foci of infection, and by the use of the electrocardiogram have shown tissue pathology in the heart. These criteria are recognized by standard authorities as positive proof of a rheumatic heart disease.

It is very important in searching for the cause of a pathological condition in the human body to know where to look. I am submitting a simplified list of the many causes and suspected causes, which if followed in a practical way will save much confusion in an effort to arrive at a conclusion.

Diseases and infections known to cause both acute and chronic organic heart disease:

Sub-acute or chronic tonsillitis and sinusitis, rheumatic fever, scarlet fever, chorea, streptococcal sore throat and syphilis.

Disease and infection known to cause acute but not chronic heart diseases: diphtheria, staphylococcal infections, pneumonia, gonorrhea, and pulmonary tuberculosis.

Diseases and toxic substances not proven to cause acute or chronic heart disease:

Thyrotoxicosis, myxedema, pernicious anemia, alcohol, tobacco, and foods in general.

Female age 60, single, bookkeeper 29 years in one firm.

History: Tonsillitis all younger life. Had heart attack when twenty years of age lasting twenty-four hours (tachycardia) coming on while doing rather strenuous exercise. At twenty-five had an acute rheumatic fever, polyarthritides, recovered completely apparently. High blood pressure discovered in 1926, with anginal attacks. At this time she came into my hands. Electrocardiogram made shows auricular fibrillation and other signs of rheumatic heart disease. There was a soft blowing murmur over the apex at that time. Urinalysis was negative. She was placed in bed seven months and was unable to leave house for two years; during that time developed appendicitis and one year later gangrenous appendix was removed. Made a good recovery and a substantial improvement sufficient to do ordinary light house work two years later. She has been on maintenance

dose of digitalis continuously. Blood pressure August 1939 was 100-110, pulse 100 sitting. There was no murmur, no arrhythmia, heart size questionable. Electrocardiogram shows a right axis deviation in first lead, rather marked digitalis T-wave second and third leads. If one can depend upon a history this is a typical case of sub-clinical rheumatic heart infection five years before rheumatism appeared with a slow progress of twenty years before heart disability developed. Fifteen years later shows heart well compensated. General appearance rather poor. Tonsils atrophied. Teeth good.

School boy, age 13. Upon examination for life insurance physician found his blood pressure to be S 180, D 120. Was referred to me for further examination with a notation that the urinalysis was negative.

History: Had never had acute tonsillitis. Had had severe leg ache (growing pains) in earlier life. Because of an odor and a discharge from the posterior nares, tonsils and adenoids were removed at seven years of age. Very little relief resulted from the operation as the following symptoms continued. Frequent colds, dark area under left eye, short attacks of fever, followed by discharge of the posterior nares, with temporary relief. After this date and during April he was treated often by a local throat specialist who states there were large quantities of pus removed from the antrums by irrigation. Was advised that a permanent opening was the best chance for relief, but would not guarantee permanent cure of sinusitis. He was taken to a noted clinic. After a few days examination his mother was told that there was nothing they could find that was the cause of the trouble and could recommend nothing for relief. They further stated that he had no permanent damage in the heart or system from the condition at this time. Electrocardiogram made 3-13-39 shows slightly prolonged ST-interval in the first lead, slightly less marked in the second lead, very low, almost diaphasic P-wave, slurred R-wave, beginning widening of the QS-interval and a very marked down T-wave in the third lead. Blood pressure has been as high as 220 a few times since the first examination. This is a case of chronic sinusitis with childhood rheumatism, with a very marked high blood pressure in an otherwise normal boy, without signs of physical handicap.

Male, age 63, conductor. History of bad throat, frequent tonsillitis for years, had severe rheumatism three years ago, when tonsils were removed with much re-

lief. First examination made July 1, 1939, with the following history:

On June 24, 1939, while walking through tram sudden turn threw him across back of passenger seat. Caused some distress, pain, soreness in the left chest over cardiac area and dorsal spine. I am aggravated by quick motion or deep breathing. History of low blood pressure. No shortness of breath. Blood pressure 130-170, pulse, 70, heart questionable in size, there is no murmur. Some suspicion of heart disease by auscultation. Urinalysis negative. Electrocardiogram shows extreme prolonged PR-interval, the PR-interval increasing until it appears before the T-wave of the preceding ventricular complex, shifting back to a near normal position, and the same phenomena are repeated. Left axis deviation in the third lead. Ten days after this examination acute inflammatory rheumatism developed in the right foot, which has continued less acute until this time. This is a rheumatic infection of the heart tissues (conducting system). The part played by the injury is questionable. Six weeks later the following gram was made showing a more marked Wenckebach's phenomenon (2nd stage) partial auriculoventricular block, indicative of acute myocarditis of rheumatic origin. X-ray did not show injury to bone.

Housewife, age 19. A bad family history. Was a well developed eight pound girl when born. Contracted measles at six months, complicated by bronchial pneumonia. Had colitis for two months during second summer. Was a mouth breather, had very large inflamed tonsils and adenoids, removed at three years of age with relief from the tonsillitis and mouth breathing. When six years old developed a very serious sore throat, no rash, scanty urine, blood tinged, loaded with albumin. Generalized edema. Made a very slow recovery. Urine negative in about seven months. She was under weight with poor nutrition until the eleventh year. From then until the fourteenth year she became a very normal, well developed girl for her age. Married at fifteen and became pregnant at seventeen. When I examined her at the end of the third month blood pressure was 120-80, urine negative. I referred her to another doctor and she was kept under close observation and no trouble developed until the end of the eighth month, when the blood pressure went up, albumin appeared, and in spite of rather rigid treatment with rest and diet she was in a rather critical condition the day before a forceps delivery in about eight hours. Blood pressure at that time was

200-100, urine loaded with albumin. She had a rather severe hemorrhage followed by chills and fever but finally recovered; but for about one year she was in very poor health, secondary anemia, etc. During the next year was operated on for appendicitis, kidneys and blood were normal at that time. In December 1938 she returned to my office with a badly swollen right knee and ankle, acute rheumatism with slight fever, all of which subsided in about three weeks. Since her confinement she has noticed a shortness of breath, rapid pulse on effort. On May 23, 1939 while working over a hot stove became dizzy, heart became very fast, she was cyanotic, lasting over an hour. She did not call a doctor. This gram was made twenty-four hours later, with a physical examination. Blood pressure S 100-70, S 120-70, pulse 130, heart normal in size, no arrhythmia; there was a soft blowing murmur near the apex. Electrocardiogram shows sinus tachycardia with erratic P and T movement first and second leads. Widening to two-tenths second of the QS-space and inverted T-wave in the third lead.

This is unquestionably a rheumatic infection contracted in early life lying dormant but not harmless, showing its malignancy only when the physical resistance is overtaxed, as in pregnancy. It also proves my contention that high blood pressure is not a disease but a symptom similar to fever, caused by many functional pathological conditions located in different areas of the body. This high blood pressure is probably caused by restricted blood flow to the kidneys, as emphasized by Goldblatt, or setting up a viscerospasm suggested by White.

Housewife, age 26. Chronic tonsillitis in early life, removal of tonsils ten years ago (grew back in two years). No rheumatism. Chronic tonsillitis ever since the operation, with acute streptococcal sore throat in March 1938 and again January 7, 1939. During the last attack patient went into a circulatory collapse, lasting about four hours (severe tachycardia), recovered without heart symptoms since, except shortness of breath with a rapid heart on slight exertion. Blood pressure 120-80, pulse 100 sitting. The electrocardiogram shows slightly elevated T-wave first lead, normal second lead with left axis deviation and inverted T-wave in the third lead. This is a sub-clinical type of rheumatic heart infection following chronic tonsillitis, with two severe attacks of streptococcal sore throat.

Male, age nineteen, examined April 25, 1939. This boy has never had ac-

ute tonsillitis or rheumatism. Has had heart symptoms for over two years, with high blood pressure, running 200 and over on different readings. Has been treated for high blood pressure two years. Three or four bad attacks of fluttering, with severe pain in heart, brought on by exertion. Upon my first examination, April 25, 1939, his blood pressure was 160-80, pulse 110 sitting. No murmur, no arrhythmia. Heart normal in size by percussion. Teeth in good condition. Tonsils show chronic tonsillitis. Electrocardiogram shows very marked myocardial damage; inverted T-wave, low voltage in all movements in first lead. Shows sharp, peaked P wave, narrowed PR-interval, widening of the QS-interval, exaggerated R-wave and lengthening of the ST-interval in second and third leads. This is a sub-clinical rheumatic heart disease, diagnosed by the electrocardiogram, and chronic hypertension. Four months after tonsils were removed, September 5, 1939, blood pressure 132-80, pulse 70, heart symptoms relieved, doing light farm work without symptoms except when over-exerted. Second gram shows questionable Wenckebach phenomenon.

Male, age 32, farm laborer, first examined August 1938. Has had temperature, slight cough, sore throat and infected mouth for several months. Sore throat during early life. No rheumatism. Appendectomy April 1938, complete recovery.

Symptoms: Palpitation, tight breathing with pain over the cardiac area on slight exercise. Blood pressure 150-84, pulse 100 sitting. Teeth show pus around gums, which are in bad condition. Chronic tonsillitis. No rheumatism in history. Teeth were removed at once. No improvement. Rheumatism developed in hands and fingers in November with a soft blowing murmur over the apex. Blood Pressure 120-180, pulse 110, temperature 100. Electrocardiogram exhibited shows tendency to right axis deviation with prolonged ST-interval first and second lead. Third lead slight widening of the QS-space, depressed T-wave. This is a case of sub-clinical rheumatic heart disease diagnosed by electrocardiogram several months before manifest rheumatic signs.

Male: age 65, business man, first examination August 30, 1934. Has never had acute tonsillitis nor rheumatism, but has been treated for sinusitis occasionally for years, and was advised to have tonsils removed fifteen years ago. (Chronic tonsillitis) History of low blood pressure.

Complaint: Pain in cardiac area, aggravated by exercise, light attack this A. M. Heart sounds rather distant and apparent-

ly enlarged to left. No murmur, no arrhythmia. Electrocardiogram made on this date shows pulse rate of 120, sinus tachycardia. Under treatment and advice he was relieved of some distress until February 4, 1930. A few days after an acute attack of heart pain the electrocardiogram showed slight evidence of myocardial involvement. On October 1, 1937 a much more severe attack relieved by nitroglycerine and morphine. A gram showed a more marked involvement of the coronary arteries. On April 30, 1939 very severe attack following a rather strenuous day of traveling. Typical angina pectoris involving left arm, relieved by nitroglycerine and morphine except there persisted pain and soreness in the right side of face, neck and ear. Right tonsil showed acute tonsillitis with flare up of sinusitis which was treated a few days by a specialist with symptomatic relief. A urinalysis made at various times was negative. Blood pressure has varied between 176 S. and 106 D. and 146 S, 96 D. This gram shows a definite lengthened ST-interval in the first lead flattened T-wave, slight widening of the Q. R. S. interval in the second lead with inverted T-wave, prominent Q-wave, slurring of the R-wave and slight widening of the QS-space. In the five years I have had the care of this patient he has had a chronic tonsillitis, rather troublesome sinusitis, and a progressive involvement and gradual narrowing of the right coronary artery proven by serial electrocardiograms.

I want to point out that this first group of diseases shown streptococcic sore throat, rheumatic fever, scarlet fever, chronic tonsillitis, chorea, and chronic sinusitis are of one family and there is a strong tendency in the profession to suspect one strain or one germ of that family that is noted for its tenacious habits, chronicity and resistance to specific medication, (Sulfanilamide) according to Ottenberg and others. That the tonsils and sinuses are the only locations that may continue indefinitely with a low grade inflammation without producing invalidism, definitely condemns them as the permanent site of the metastatic foci. There is other clinical proof that upon their successful treatment satisfactory improvement results in a very large percent of cases. This result will depend on two conditions; the extent of the tissue damage in the heart and the successful eradication of the metastatic foci.

Remember that if the heart tissues are damaged sufficiently to produce total disability, the disability will be permanent. Sufficiently long care and treatment may

restore compensation but cannot restore heart reserve. If I have emphasized some of these old and worn ideas to induce a few of you clinicians not only to read this address but the literature referred to, so that you may recognize the very early appearances of a dangerous heart condition, and by instituting treatment to avert a chronic organic heart disease. I shall accept it as a compliment and a happy reward by my efforts.

PUBLIC ADDRESS

PROPHECY, MEDICAL AND OTHERWISE

ROGER I. LEE, M. D.
Boston, Mass.

It seems now a long time ago that I listened to the suave blandishments of your chairman to be with you this evening. I knew it would be a great pleasure to greet old friends and meet new friends, in Kentucky. I wanted to see at first hand Kentucky medicine. Consequently, I accepted with the greatest alacrity. I exemplified the teaching of Freud, namely that one does what he likes and then tries to find the reasons for his action afterwards. It is not true, Freud points out, that a man as a rule reasons out a line of action and takes it but quite the other way around. This process is known as rationalization.

As I began to rationalize my acceptance of this flattering invitation, I realized too promptly that I had nothing of importance and nothing that was new to bring to the Medical Profession and to the laity of Kentucky. Your practice of medicine, your standards, your Medical Colleges are as fine as any in the world. Your medical traditions and history show the same ideals, the same intelligence, the same skill, the same courage and the same self-sacrificing devotion that characterizes the best and greatest in medical tradition and history.

What is there that I could say of the changing practice of medicine and how medicine is meeting the challenge of the changing social order, which could compare with these calm scholarly but charming words of a good Kentuckian, my friend and your friend, only recently president of the American Medical Association, Dr. Irvin Abell.

It is already an old story to you that they have had compulsory health insurance in the British Isles for a goodly number of years and it hasn't reduced the death rates nor the

sickness rates and their hospital accommodations are far inferior to ours. All this I say is well known to all of you.

And so like many another weakling I lived like an ostrich with my head in the sand.

A long promised holiday took me across the water and there I learned such things as that Scotch is a kind of whiskey but the people of Scotland are Scottish, not Scotch, and that the wee bonny burn in which your golf ball comes to rest is only a damn bloody ditch when your Scottish friend's ball comes to rest on the same spot. Then across the water came a polite but firm request from my old friend, Arthur McCormack, that stalwart member of the Scottish Clan of Buchanan, for three copies of my paper, to be delivered on or before August 25th. My useless mind at once conjured up the picture of Arthur in kilts and sporran of the Buchanan tartan. That was a pleasing thought but not helpful. And then a dark and direful shadow spread over Europe and the rest of the world. The mind turned inevitably back 25 years. In the midst of alarms, black-outs, testing of gas-masks and dug-outs, preparations for air raids, the evacuation of large centers, we left England with despair and desperation perhaps uppermost in our minds. The air was full of rumors, of guesses and of prophecies. And herein developed an idea, crude and chaotic, but yet an idea that all of us have had our minds turned the wrong way, backwards rather than forwards. We have been living too much in the past. We have been dwelling overmuch on the misfortunes, the accidents, the wrongs of the past. Some of our disciplines such as history and the law turn always to the past. Even medicine perhaps concerns itself overmuch with the historical past of patient and peoples. All of this is necessary to a certain point but actually the future is the thing. But who knows the future, who has the gift of prophecy? But we cannot change the past. That is done but the future is ours, for some of us not a long time perhaps but for others and for our children the future will be the present of their unhappiness or happiness and then that will become the past. So let us blot out much of the past and even much of the present and resolutely turn our faces towards the future lest we be turned into pillars of salt.

Really no one has the gift of prophecy, but many practice it, from the weather man to a Wall Street broker. The doctors have a habit of limited prophecy, known to the medical trade as prognosis. It is one of the triology, trinity or triplets that doctors do

business by. The three are Diagnosis, Prognosis and Treatment. And yet it is this medical prophecy or prognosis limited although it is, that causes a lot of trouble. While we are passing so many laws, it might be a good idea to pass a law prohibiting prophecy. It is bad enough to be an historian. The historian knows for example that there was a war and there was a depression. Now the economists, without any exception as far I know, told us that the last war could not last. Their prophesying was so positive that they stated it as a fact. And yet they were wrong and they haven't been able to explain it yet. That is terrible because we all feel as if we were entitled to some explanation the day after the horse race or a foot ball game. We want to see how the prophet is going to eat his prophecy. Then it helps the Monday morning newspapers which are rather dull affairs.

But this wrong prophecy on the part of our economists as to how long the last world war would last was an error of commission while the failure of any economist to prophesy the depression was an error of omission. They both were wrong, no matter what you call them.

Of course, looking backward, our historian knows that there was a World War. He must know it, but even then the historian like other people forgets things. However, history is not what it used to be, like the auto, the wife and other things. History has gone streamlined and modern. It has adopted the syncopated dissonance of modern music together with surrealistic neo-impressionistic tendencies of modern art. As I understand modern art, which I do not, the picture should not look like the landscape or face scape depicted (that is basely photographic) but rather the way someone who feels violently about the land or face, thinks it ought to look. Lovers are notorious in seeing things distorted. Haters are worse. And so when colors are added, the result is at times amazing. And even the photographers smarting under the derision of making a fac-simile of nature can perpetrate some weird results. In any event that seems to be the present technic of the historian and with this technic history takes possibilities that are startling and perhaps horrible. But an earnest historian can always defend himself. Unlike any prophet he is never on the end of a limb and he may be right.

But our doctor is in no such fortunate circumstance. From the beginning of the first interview with the patient, the doctor is tempted to prophesy. That is the point where the doctor should thrust the head of

the gold cane into his mouth and keep it there. That is what the cane is for. The lawyer is far safer at the first interview, because he just promises to look up the law in his big law books and see if he can do what you want him to do which is always against the law. And ordinarily he has the alibi of a Court or of a jury, if things go wrong and contrary to prophecy. Now it is a very curious thing that if a doctor prophesies recovery and the patient dies, the doctor is rarely if ever blamed. On the other hand, if a doctor prophesies death and the patient recovers, the doctor is held up to all sorts of derision. Herein lies a fundamental bit of human psychology. The quack and charlatan utilize this to the full. Note please that the technic is somewhat after this fashion in their testimonials, usually faked—"after having been given up or pronounced incurable by one or several doctors, Mrs. —, of — took the quack remedy and is now well." Even if the family doctor has given an honest opinion in a case of extensive cancer, the patient or his family or his friends, disregarding all experience will often try an obvious quack because he understands human psychology. The quack has to know human weaknesses for it is his only stock in trade. Of course, the quack's paradise largely consists of apprehensive neurotics with lively imaginations. In this paradise will be a few, but only a very few mistakes. If any doctor is reported as *batting 1000*, no matter in what league, it is not so. But some doctors at least might benefit themselves and their patients by a careful consideration of the psychological fact that patients prefer optimism. In the matter of medical prophecy and in the practice of optimism, there is no need of lying to patients. But in truth telling which is medical prophecy one must needs be "damn" sure it is the truth before one is unpleasant. Again, it should be remembered that despite modern art and modern literature, truth does not have to be unpleasant. There is a widespread notion that truth, while useful, must be disagreeable. In that respect it resembles the manure heap, ugly, odoriferous, but withal necessary to crops and life itself. So truth is conceived as ugly and odoriferous but withal necessary to character and life. When some one comes along and says to you, "Now I am going to be perfectly truthful or perfectly frank," you shudder and wonder what dark corner of your life is going to be aired with its ugliness and bad smells. And you are usually right, it will be unpleasant. But in point of fact in these days, the pro-

phetic message of the doctor, his truth to the patient is usually a happy, an optimistic message. The pace of medical progress has been so fast that the attitude of the public, the patients, with all its complicated ramifications, is on the whole about that of the doctors one or even two generations ago. In these ways the public like grandma and grandpa live a good deal in the past. The impressions of one's childhood, youth and early adult life are always the most vivid of our impressions. And yet while grandma may be generally scornful of operations and prejudiced against modern obstetrics and modern pediatrics, nevertheless a demonstration of modern obstetrics in the case of her daughter and of modern pediatrics in that modern babies do not die, the way hers did, is often extraordinarily educational. Then, too, there are some grandmothers still alive who cannot forget when death came to the house in the form of diphtheria and took away in the midst of health, one, two, three or perhaps more of the children who were so hard to bring into the world and so hard to raise in the early years of their lives.

But generally speaking the prejudices, the hopes, the fears of the public today were those of the medical profession a generation or two ago. The instinct of self-preservation is a farce always to be reckoned with in human behavior and of course in the doctor-patient relationship.

But these observations are by no means confined to the patient and disease, although often the behavior seems simpler under these conditions. Illustrations may be found in every branch of human activity. In the realm of music Beethoven, Wagner, Tchaikovsky, and others were regarded as outrageous innovations. Yet today they are classics. In architecture, we have come by painful steps from the pure Grecian, the pure Gothic and the pure Colonial to something that may seem strange to us and may be merely transitional. And the same is true of the pictorial art and literature. By the time man gets thoroughly used to some thing, the world moves on and your average man tends to be indignant. It is true that much of modern music, architecture and art smacks of the technic of the quack in medicine. But we are not satisfied with stationary medicine nor, with a music, architecture, art or literature that is static and never moves. We dare not say that because our English language is perhaps most nobly expressed in King James' version (translation) of the Bible, or because Shakespeare handled words more deftly and more gracefully than any other, there

should be no deviation from the principles exemplified by those two great classics. Of course, there are exasperated moments when we might like to consign to torrid oblivion some modern literature, some modern music, some modern art and some modern architecture, that is to say quackery medical or otherwise.

And there is always the danger of getting used to something ugly or something untrue. A wise woman once said, "Never keep anything ugly in your house for soon you will get used to it and finally fond of it." One feels that patients get attached to some of their infirmities for certainly they seem to hate to part with them.

And certainly one can find adequate illustrations in the body politic. People collectively and individually are a long way behind the best thought. War as a remedy of diseases politic is obviously as absurd as the treatment of appendicitis by counter-irritation. There are the same quacks in politics as in medicine. They use the radio, the press and what not. But that does not mean that we want to go back to the old days in politics any more than we really do in medicine. Ah, for the old days of the good old general country practitioner, the laity says. Drunk or sober our good old doctor did us well and only charged fifty cents or a dollar a visit. Yes, and there were no telephones to call the doctor with and no automobile to get him to you in a hurry. And diphtheria was croup in those days and the children often died of it. And appendicitis was intestinal inflammation and people died of that. And women sometimes had the pangs of labor for days and the old graveyards tell the story, many little tombstones for many little ones that were not raised and often a big tombstone or two or three that testified to worn out wives and mothers or perhaps child-bed infection. And wars seemed necessary to even up the numbers of the two sexes.

And who wants another Civil War, or another World War? Who wants a house without electric lights or a bathroom or a radio or a telephone? We like our oranges from California or Florida, our ice cream, our refrigerated foods, our China tea, our Central or South American coffee, our Chicago beef, our Idaho potatoes, our Cuban sugar or tobacco. We want to keep all these and yet we sigh for the good old days. And in proof of that we hang on to some of our disfiguring deformities and diseases and keep our resentment still agonizingly fresh by constant reference to them. In point of fact by keeping our faces turned backward we seem to keep all that ugliness and to miss the beauty of the

old and particularly to have missed its lessons.

In medicine many doctors refer to those good old days in Vienna in the Allgemeines Krankenhaus. Ah, that was the place to learn medicine. We saw a mob of sick people and many of them died and we saw the autopsies and we learned much. But we missed much too. If a patient recovered there seemed to be sorrow because there was no opportunity to study further the disease. Again there was a scanty interest in prognosis and essentially none at all in treatment. There was no follow up to see what happened to patients. To be sure, there was a solicitude regarding diagnosis but a therapeutic nihilism that was actually scandalous.

While it may be that no doctor has the gift of prophecy, he can improve his prognosis. He can, by setting his face forward, follow up his patients, so that his prognosis will be better. As the most important part of a change in his viewpoint, he will become more skillful in treatment. And even our surgeon who claims to be a specialist in a particular branch of treatment may improve himself. For is it not whispered that only when a particularly intelligent surgeon (the surgeons are all intelligent but this one was particularly so) had a duodenal ulcer himself, did the idea come to him of looking up the surgical results of gastroenterostomy for duodenal ulcer? In any event, the particularly intelligent surgeon was not operated upon and the operation of gastroenterostomy has fallen into disfavor in the treatment of uncomplicated duodenal ulcer.

It is true and not paradoxical, only inconsistent, that the laity are at once a generation behind the medical profession in their medical knowledge and beliefs and yet are a generation ahead of the medical profession in that they are more interested in prognosis and treatment than in diagnosis. In other words the laity in medical affairs rather have their faces turned to the future, rather than to the past. What patient who has an affliction due to alcoholic excess or to venereal disease really appreciates a lecture on morals or how he might have avoided it? The patient wants to know what can be done about it and can he be cured. And as I have said before, the medical quack, like the demagogue, promises active treatment and cure. Take a bottle of pills and be well. Vote for Smith and be prosperous. But there is sound psychology in such rot and hence the temporary success of some of it.

For years our general practitioners have

been telling us that treatment has occupied too low a place in the medical regard. To be sure, we have had the arsenicals, insulin, liver therapy and sulfanilamide and sulfapyridine and we have had surgery. But in general, we have been far too complacent in depending upon the self limitation of disease. Indeed we wonder often how to steer a sane course between the Scylla of self limitation of disease and the Charybdis of meddling medicine, or between masterful inactivity and precipitate action. It is a fact that patients like action and a large solicitous family may actually push treatment into the exhibition of procedures as irradiation, drug therapy or operation in preference to sounder inactivity.

I have not touched at all upon perhaps the most important feature of forward looking. I mean, of course, preventive medicine, so highly regarded but so little practiced.

I do not refer merely to the prevention of the spread of the infectious diseases which is indeed a small part of preventive medicine. I refer rather to such little understood matters as nutrition and diet, exercises of mind and body and the like. We toss about glib phrases as the importance of physical exercise and physical fitness. But how important is it and what form of exercise is best? No matter how much exercise a man takes, he will not be as strong as a gorilla. No matter how hard he practices, man cannot jump as far as a grasshopper. I take it that man at his best wants a fit body to be the vehicle usually for his intellectual activities. And at what age should man give up the more violent form of exercise and what of the daily dozen, etc?

And how little do we know of fatigue, that devastating enemy of so-called modern life. And how can man so live as to minimize his tendency inherited, acquired early or late to worry, apprehension, and fear? We know only too well that worry, apprehension and fear will nullify or at least markedly diminish a great intellectual equipment with possibilities of adding much to the world's knowledge, comfort or happiness. The answer to some of these questions at last will be found in forward looking by the medical profession.

The Chinaman tends to contemplate the past. He worships the past, in history in literature in art, and in his ancestors. From this attitude he derives a calm, a comfort, and a fatalism that makes him amused and tolerant of the present and oblivious of the

future. That attitude modified to be sure is a good deal of the attitude of Europe today. Each nation wants to revert back to the precise years of its greatest national glory, the years of its greatest territorial expansion. Modern resentments and hates find their sources in the glories of the past. And in America, we are showing signs of the same tendency, although the happy old days when this country was the happy hunting grounds of the red man are sufficiently recent to help chasten this tendency.

In medicine, we have the same tendency and even as an internist, once quaintly referred to by Will Rogers, as just a traffic cop, I see very clearly this backward looking tendency. We internists often worship overmuch at the Shrine of diagnosis. We give a patient a long, elaborate and costly work-up as we call it, pronounce a verdict and mostly wash our hands of our responsibilities in the case. But the entire profession must turn its face about, look forward, develop prognosis, immediate treatment and especially remote treatment, which is the true preventive medicine. And thus having declared that prophecy is dangerous and unsound, I have indulged in medical prophecy. But consistency is a virtue of small minds.

Demonstration of Tubercle Bacillus.—Campbell describes the advantages of the various methods of demonstrating the tubercle bacillus and attempts to establish comparative value of the aids to diagnosis in a series of fifty suspected children. In the efforts to demonstrate the tubercle bacillus in pulmonary tuberculosis, the greatest success was obtained by culture of the washing of the stomach. Of the twelve cases in which the tubercle bacillus was eventually isolated, culture on Loewenstein-Jensen medium was carried out in ten instances and was positive in eight; i. e., 80 per cent. Of the twelve positive washings from the stomach, sputum was obtained in eight instances, and of these five or 63 per cent, disclosed the presence of the bacillus. In addition to the lower proportion of positive results from examination of the sputum the difficulty, indeed the impossibility, of always obtaining the sputum must be taken into consideration. Although the children resent lavage of the stomach, the swallowed sputum can always be obtained. Direct smear of the washings of the stomach was not much less frequently positive than was culture. In the ten positive cases in which culture was carried out the organism was found by direct smear in five.

ORIGINAL ARTICLES

COMPLICATIONS OF THE TREATMENT OF SYPHILIS

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The treatment of syphilis involves many more considerations than the supplying of adequate treatment to effect a cure, and the beginning of any therapeutic regime with a patient must be accompanied by full realization of all the possible deleterious effects of our treatment on the individual at hand. The possible complications that may accompany treatment are many fold and serious, some even fatal. An immediate plunging into the treatment of the disease without first investigating all that can be found out about the patient must be avoided. In this paper the term arsphenamin is used to designate all forms of arsenicals except when otherwise definitely stated.

The proper approach to treatment must always begin with a thorough history, obtained by careful and thorough questioning of the patient. By this we may elicit a history that is suggestive of myocardial weakness, susceptibility to drugs, and previous allergic reactions to other injectible substances. After we have exhausted the store of information gained from the history, a thorough physical examination is next in order. By this we will pick up certain remedial physical defects, which should be corrected before we begin treatment, or at least at the same time as treatment is begun. Probably the most glaring disorder is oral sepsis, and this can be eliminated at the outset. From a careful history and examination of the patient we will get some insight of his tolerance to treatment and can be on guard for untoward events. If we find the patient intolerant, our next step is to try to improve the tolerance, rather than to reduce our treatment. Nor must we lose sight of our own imperfections in a course of treatment, for often unfavorable results may be traced to our own errors in technique rather than to intolerance in patients. First let us consider the respective toxic effects of mercury and arsphenamin on the principal portions of the body:

Liver: Mercury is mild, while arsphenamin has a strong toxic effect.

Kidney: Mercury is very toxic, arsphenamin being about 1-50 as toxic.

Blood vessels: Mercury milder than arsphenamin.

Myocardium: Arsphenamin very serious, mercury not so serious.

Whole vascular system: Mercury more severe, probably results in arteriosclerosis.

Stomatitis: Mercury stomatitis severe, arsphenamin mild and not common. Dermatitis: Mercury mild, arsphenamin serious.

General reactions: Mercury asthenia, depression, anemia. Arsphenamin is a tonic and hemapoetic stimulant.

One of the foremost causes of reaction to syphilitic treatment is a therapeutic shock known as the Herxheimer reaction. It is a therapeutic shock to tissues actively involved by spirochetal infection. It may occur at all stages of the disease. There are two distinct phases observed, namely focal and systematic. The focal phase involves the area of the local lesion wherever it may be. It is characterized by swelling of the part, redness and discharge. In short it is one of local inflammation. Any other active lesions in the body, even though hidden will be similarly involved. The reaction usually occurs eight to twelve hours after intravenous injection of arsphenamin, and manifests itself on an acute process in an easily accessible tissue. In tissues of low vascularity or in those that are resistant to arsphenamin, such as the C. N. S. the reaction may be delayed for days and even weeks and will remain present for a long time in these tissues which were invaded with difficulty. The seriousness of the Herxheimer reaction is proportionate to its location, thus a reaction in one of the long bones would be of no serious consequence, while one located in the larynx might result in asphyxiation of the patient, or one in an aneurysmal wall might result in rupture of the arterial wall. The systemic reaction, although uncomfortable for the patient is rarely of serious consequence. It manifests itself by a mild fever, aching, headache, and general malaise. Frequently a systemic Herxheimer reaction may follow the first dose of arsphenamin and is of little consequence in an early case, but should it occur similarly in the beginning of a late case, further treatment must be given with extreme care. This will be found particularly in cases where the initial dose is large. When vital structures are involved it is particularly desirable to avoid this reaction. Probably the best prophylactic measure is a preliminary course of mercury, (a week of mercury injections), before beginning to give arsphenamin. This is particularly desirable in cardio-vascular syphilis, and neuro-syphilis.

Rest in bed and general supportive treatment is indicated in this reaction, and fortunately the symptoms usually do not last unreasonably long. Future treatment must be carried on with caution, and the dosage of arsphenamin greatly reduced.

Despite all care we may take there are certain individual idiosyncracies, and sensitivities that we cannot detect or prevent their manifestations as a reaction. One of these is the acute vascular reaction known as the nitritoid crisis. This reaction is sudden in its onset, usually while the injection is in progress, but may be delayed a few minutes following its completion. The first sign is a sense of uneasiness on the part of the patient, with a feeling of constriction in the throat. The eyes become suffused, and there is a flushing of the cheeks, which is, at times, accompanied by a circumoral pallor. At these signs the injection should be stopped at once. If the injection is continued there is a marked respiratory wheezing and marked constriction of the laryngeal muscles. This may be followed by unconsciousness and a pulseless patient. Subjectively there is a sense of suffocation and impending death. If, however, the injection is stopped at the first signs the duration of the reaction is soon terminated, and the results are not serious. But if the reaction becomes full blown in individuals with serious organic lesions death may follow. The reaction may simulate that which occurs with the administration of an imperfectly alkalized or acid arsphenamin, except in the latter there is severe pain in the lower back region and the flush soon turns to an ashen pallor, with suspension of both radial pulse and respiration. In giving arsphenamin the arms, neck and shoulders of the patient should be exposed so that the operator may note the first sign of the nitritoid crisis. If noted stop the injection immediately. Now if the reaction subsides immediately wait about five minutes then proceed cautiously, and with a very slow rate of administration. If, however, the reaction is progressive, inject 10 minims of 1:1000 solution of adrenalin, or if very severe, 5 minims intravenously. Future injections should be given with great caution, and frequently it will require all our diplomacy to persuade the patient to submit to any further injections of arsphenamin.

Arsphenamin collapse is a spectacular, and often a fatal complication, if not acted upon immediately. It is caused by the injection of an acid arsphenamin or a deteriorated product. The symptoms are those of

a complete circulatory collapse, sudden pallor, cold and clammy skin, pulselessness, unconsciousness and some times a speedy exodus. The onset is sudden after the first injection of the drug, and must be immediately combatted with intravenous injection of 1:1000 adrenalin which should be followed by administration of Fischer's solution per rectum. Fischer's solution is made up as follows:

Sodium Carbonate	10 gm.
Sodium Chloride	14 gm.
Distilled Water	qs. ad. 1000 c.c.

There are several procedures whereby we may tend to prevent a nitritoid crisis. First we may divide the dose by giving 1-10 of the dose intravenously, waiting from 30 to 45 minutes and then giving the rest of the amount. In that way if we are going to get a reaction it will be very mild with the original dose and it will be a signal not to continue. Another method is to give 1-50 of a grain of atropine sulphate about 20 minutes prior to the injection of the drug. Since the most common form of arsphenamin used today is neo-arsphenamin the method of the French operators can be used, namely the continued constriction of the tourniquet during the administration of the small portions of the drug. This gives opportunity for the development of a protective mechanism from absorption from the vein before the arsenical is released to the entire circulatory system. Another method is to inject an alkaline buffer prior to administration of the drug. Sodium bicarbonate may be used for this purpose. Also we may mix 5 to 10 minims of 1:1000 adrenalin in the arsphenamin. Slowing the administration by delay or by greater dilution is another effective method.

By far the most common complications encountered in the treatment of syphilis are gastro-intestinal in nature. For this reason the eating habits of the patient should be inquired into, and the patient advised as to his diet and elimination. The alimentary tract should be kept clear with a mild non-irritating laxative. Diets of high caloric value should be prescribed. Any organic lesions of the intestinal tract should be corrected as far as possible. Mercurial anorexia is not common now as it is more prevalent when the mercury is taken by the mouth rather than by inunction or injection. Inasmuch as mercury is eliminated by the bile, it is occasionally a troublesome complication. The diarrhea it causes is usually of a mild nature and can be controlled by a soft diet and boiled milk. At times there may be a more severe bloody diarrhea that will necessitate the use of paregoric after each stool for awhile and rest in bed. Bismuth subgallate, 30 to 60

gams, may have to be given every four hours. If there is much tenesmus an ice bag should be applied to the abdomen, and as a last resort a hypodermic of morphine may be needed. The diarrhea is transitory following the injection of the drug, and any permanent diarrhea should be thoroughly investigated as it will probably be found due to some other cause. In some patients we find the reverse true and a stubborn constipation the case. Here we must use only a mild laxative as any harsh purge may set up a diarrhea. This constipation is probably due to some change in the ordinary intestinal flora of the patient by the mercury. Mercurial colic is probably due to an idiosyncrasy to the drug and results in severe abdominal pain accompanied by rigidity and some times distention, but with no localizing signs. The picture is not unlike that of an intussusception or intestinal obstruction. This will be relieved by hot packs or hot turpentine stupes. If it recurs with further treatment, the treatment should be discontinued. The other heavy metal, used in anti-syphilitic treatment, bismuth, rarely produces any symptoms, and, if it does, they are very mild.

On the other hand arsphenamin rarely gives rise to the severe anorexias of mercurial treatment. Except for the usual lack of appetite usually persistent in the first 24 hours following the injection of arsphenamin, there is usually a tonic effect exerted in the gastro-intestinal tract. Although vomiting may accompany a nitritoid crisis, it usually indicates a full stomach. The patient should be cautioned about omitting a meal prior to the next injection. Not uncommonly, however, there may be a nausea which will persist for as long as 12 hours following the injection. For any continued nausea and vomiting have the patient chew cracked ice and swallow it, and in more severe cases they should be put to bed and an ice bag to the pit of the stomach. Bromides per rectum may have to be resorted to. Cold buttermilk or cold beer will often cause cessation of the nausea and vomiting. Should there be a tendency for this complication to occur, injections of atrophine sulphate before injections should be resorted to. The incidence of arsphenamine diarrhea is negligible. Occasionally arsphenamin treatment may precipitate a gastric crisis, but here the other symptoms of the crisis must be taken into consideration to differentiate it from merely an arsphenamine gastro-intestinal reaction. There should be some tabetic symptoms present, and marked pain that is usually not present with the simple condition. Another condition that must be remembered in vomiting is that it may be a part of the syndrome of acute yel-

low atrophy.

Next let us consider the systemic types of reactions in the treatment of syphilis. Stomatitis is most common with the treatment by mercury and bismuth, but does occur with arsphenamine. It is the result of either an overdose of the drug or an individual idiosyncrasy. This latter cause is particularly true of that occurring with arsphenamin and iodides. It should not be considered as a local phenomenon but as a general systemic toxemia. In the case of mercury stomatitis the metal must form some compound with the blood that results in a reduced number of red blood cells. Consequently due to this reduction of the red blood cells there is an anoxemia of the tissues, with resulting asphyxiation of the tissues and lowering of their resistance. The hydrogen sulphide in the mouth and intestinal tract forms mercuric sulphide with the mercury present, and is deposited in the capillary endothelial cells. This forms an added injury on the already damaged tissues and allows bacterial invasion in great numbers. Hence the local manifestation of the stomatitis. The first symptom noted by the patient is a slight edema of the gums, with a lividity, and a soreness on clenching of the jaws. Constitutional symptoms are absent on examination. The tissue necrosis begins in a gum pocket, usually in the region of the third molar.

Accompanying this is usually a palpable adenopathy that seems out of proportion to the primary condition. In extreme cases the tonsils, pillars, and soft palate may be involved. Later the systemic symptoms occur and are those of any other infection varying in severity with that of the toxemia. Stomatitis should be prevented. First of all any patients who have evidence of oral infection should be made to have this cleared up at the onset of the treatment. Patients should be instructed to brush teeth and gums three times daily and also the proper way to brush them. Alkaline and oxidizing astringents should be used morning and evening. The spaces between the teeth should be cleaned before each brushing with dental floss. In treating an already established case first discontinue the mercury. If the patient has been getting inunctions begin to sweat him profusely. If by injection, give general supportive treatment, trying to protect the kidneys as much as possible. Give patient an abundance of alkaline fluids. Sodium thiosulphate, given intravenously every other day for three doses is indicated. Separate teeth from swollen gums with strips of gauze and keep the tongue separated in the same manner from the gums. A mouth wash of Dobell's Solution is used every two hours and then

can in the dentist to treat the local infection. Stomatitis from bismuth is not common and is due to overdosage most of the time. It does not occur as frequently as when bismuth was first used due to the fact that we have learned that the initial doses of bismuth used were too great. Arspnenamin stomatitis indicates a dangerous idiosyncrasy to the drug, and should be viewed with alarm. It may occur independently or as part of an aplastic anemia or purpura. It differs from that of mercury, in that it presents a not dry reddened, and exfoliative appearance. The treatment is the same. Iodide stomatitis is rare.

Arsphenamin will precipitate paroxysmal tachycardia in patients who have had previous attacks of this disorder. It has a rather marked effect on the circulatory system of the heart in patients who have pre-existing circulatory disturbance of the myocardium. There is a tendency to produce attacks of angina pectoris in patients who possess a damaged coronary circulation. Uncomplicated by pre-existing cardiac disorder, arspnenamin does not produce any serious heart complications, and any cardiac deaths after its administration may be traced to some pre-existing heart disease, usually luetic in nature and involving the coronary vessels. Acute cardiac accidents should be treated with 0.5 c.c. to 1.0 c.c. of 1:1000 adrenalin subcutaneously or intravenously or, in extreme cases, 2 to 5 c.c. into the ventricle. The heavy metals do not produce any demonstrable lesions in the heart in therapeutic doses.

Formerly, prior to the advent of the use of arsenicals in the treatment of syphilis, patients developed a severe anemia from the prolonged usage of large doses of mercury. These patients showed a marked pallor, which was referred to as a hospital pallor. The advent of arsenic counteracted this by its stimulation of the hemopoietic system. There are two conditions caused by disorders of the hemopoietic system which are attributable to the use of arspnenamin. These are aplastic anemia and hemorrhagic purpura. These are more common with the use of neo-arsphenamin and sulph-arsphenamin than with arspnenamin. Should these complications be encountered, treatment with arsenicals must be permanently discontinued as they are due to individual idiosyncrasy to the drug. In the case of acute aplastic anemia, the onset will be from 12 to 48 hours following injection. Its onset is characterized by a pallor that is rapidly progressive in nature. Soon there is an arspnenamin stomatitis, accompanied by progressive weakness of the patient. The blood count at this time will show

in addition to a decreased red cell count, a leukopenia in which there is a relatively high per cent of mononuclear cells, with a corresponding relative decrease in the polymorphonuclear cells. The white cells may go lower than 1000. Treatment is not always satisfactory, and in addition to blood cells, the use of pentnucleotid will be used in stimulating white cell formation. The purpuric type is more sudden in onset, possibly beginning at the time of injection. There is bleeding from the gums and intestinal mucous membranes, and purpuric hemorrhages into the skin. This may be even severe enough to cause death in a short time. Transfusion must be considered in these cases, and intravenous injection of sodium thiosulphate, but both of these may be ineffective. Thus we see that any hemophilic is absolutely unsuitable for arspnenamin therapy. Bismuth apparently has no untoward effect on the blood forming organs.

Pulmonary complications are not so common, but are rather typical in nature. Following the injection of an insoluble mercurial in oil suspension, some of it may get in a vein and result in a pulmonary embolism. There is an immediate violent cough that may persist for some time. Soon there is pain in the side of the chest in which the embolus has lodged and a fever. The patient should be put to bed with an ice bag as any other case of embolism. Broncho pneumonia may frequently follow this complication. Following the intravenous injection of iodides there may be an acute bronchial spasm with wheezing rales over the entire chest. This is typically a case of acute bronchial asthma and responds to 1:1000 adrenalin. A preliminary course of iodides by mouth will prevent this reaction. One who shows any sensitivity to them by mouth must never be given any intravenous injections.

Arsphenamin asthma is rare and is an indication of a true sensitivity to the drug. It is usually associated with a severe urticaria, and occurs any time from 20 minutes to 4 or 5 hours following the injection. This is quickly relieved by injection of 1:1000 adrenalin. Should it occur, change the type of arspnenamin and decrease the dosage. Arspnenamin embolism may occur from the injection of an acid solution of arspnenamin due to a precipitation of the blood by the acidity of the drug. There is always a possibility of an air embolism with intravenous treatment, but this is an error in technique and cannot be classed as a true complication. The symptoms are the same as in any other embolism and also the treatment.

Arsphenamin is stored in the liver, and for this reason is responsible for liver dam-

age. This may vary from a mild jaundice to a fatal acute yellow atrophy. Any appearance of a dermatitis in a jaundiced patient getting arsphenamin indicates an intolerance to the drug and the dosage should be reduced or the drug discontinued. Probably neo-arsphenamin is the best drug to use in cases where there is evidence of liver damage, and not over 0.6 gm. per dose. Mercury apparently has no toxic effect on the liver. The same holds true for bismuth.

The kidney, being a very efficient organ with a remarkable functional reserve, resists the toxic effect of both arsphenamin and the heavy metals. Of the two the effect of the heavy metals is more severe than that of arsenic. The effect of either is one of renal irritation, and is manifest as a nephrosis. The pathology consists largely of a degeneration of the kidney tubules. The urinary findings consist of hyaline or granular casts, albumin, pus and erythrocytes. The appearance of casts precede that of albumin, and pus and can be considered the sensitive indicator of renal complication. The renal damage does not reach the stage of causing edema, headache and the other symptoms of an acute nephritis. When they do present themselves, discontinue treatment for the time necessary for the symptoms to disappear, and then proceed with the treatment, but with a careful observation for their reappearance.

The cutaneous reactions to the anti-syphilitic treatment present the greatest variety of manifestations of any group of complications. Of these the reactions to arsenicals show the greatest variety, because there is a greater tendency for arsenic to settle in the skin and because of the method of injection. This intravenous method probably creates a vascular background amenable to these complications.

Although they present the greater variety of reactions, cutaneous complications are comparatively infrequent, occurring about one in a thousand cases in the service of Dr. John H. Stokes at the University of Pennsylvania. The incidence was even rarer in the observations of Moore and Keidel, who noted 21 reactions in 47,000 cases. Their great importance is the fact that they account for 25 per cent of all deaths caused by arsphenamin.

Time will not permit a detailed description of all the varieties, but I will list the principal types and discuss a little more fully only the exfoliative dermatitis. First there is the arsphenamin urticaria and this is quite similar to any urticaria except that there may be some arthritic manifestations also evident. It responds to the injection of adrenalin and alkalization. The erythema

multiforme group may show a macular, papular, morbiliform, or scarlatina form dermatitis. The names are descriptive in themselves. Any of these forms will be preceded by prodromal symptoms that include an initial chill, fever, headache, backache, general malaise and sometimes vomiting or a diarrhea. The systemic symptoms will usually last 24 hours or longer, and differ from the Herxheimer reaction in that in the latter the systemic toxemia rarely lasts over 24 hours. Prevention of these reactions is not so simple and they may occur without the physician being able to predict their onset or preventing. If it has occurred it is best to change the drug in use and frequently this will accomplish the purpose. Sodium thiosulphate is the best drug to give in the active stage of the reaction. It should then be given every other day throughout the therapeutic period if the arsenical is to be continued.

The most serious form of cutaneous reaction is a postarsphenamin exfoliative dermatitis and only a hemorrhagic encephalitis surpasses it in fatality in the unavoidable complications encountered in the treatment of syphilis. In a goodly number of the cases there are certain warnings given us following the injection, which if we will repeat them may avoid the disaster for us. These will occur one or two injections prior to the one which precipitates the true reaction. First there is severe itching the day following the injection. Slight punctate subcuticular flush around the trunk and neck the following day. Appearance of patches of dermatitis of the face and shins are a warning. Also there will be an increased cutaneous irritability and gastro-intestinal upsets prior to the outbreak of the dermatitis. With these signs in mind always question the patient thoroughly when he comes for the next "shot," and if any of these signs have been noticed, unless one is expert in the treatment of syphilis, do not give him the injection. If however the prodromal symptoms are not given or we have not heeded them, the following will occur. Within 24 hours following the injection a general flush appears. This is accompanied by patches of an oozing dermatitis, especially in the flexures and dependent portions of the body. Itching is most severe, edema of the skin becomes widespread, and the dermatitis takes on a purple color. Chilling becomes pronounced, and frequently the patient appears to have a constant chill. Frequently there is an intercurrent infection, often of a respiratory type and a streptococcal pneumonia may be the terminal process. Fever may not be present, but usually the temperature will run a septic

curve. After the dermatitis has reached its peak the condition stays at a constant stage for a period of not less than eight weeks and frequently as long as twelve weeks. The patient now begins to lose much weight, the hair falls out, and almost always the finger nails are lost. All types of secondary infections set in and these may prove fatal to the patient. If they survive the stationary stage, the convalescence is slow and drawn out. The treatment is largely supportive and attempt to prevent serious secondary infections. These patients must be hospitalized, and will require expert nursing care. A colloid bath is given four times daily, and the skin greased immediately after the baths. Keep the body as clean as possible and as far as possible clear up all possible sources of secondary infection.

The cutaneous reactions to mercury are more prevalent than those of arsphenamin, but not severe. They consist of patches of macula-papular dermatitis, which will clear up if the drug is withdrawn, and bland lotions applied. The cutaneous reactions of bismuth are too rare to discuss here.

In conclusion we may say that the treatment of syphilis is a far more complicated situation than merely seeing the patient gets adequate medication. Some accidents are unavoidable, but most of them can be avoided by proper care on the part of the physician in charge of the case. Not only do we want to avoid them from the standpoint of safety to the patient, but even if the reaction should cause no serious damage it might put the patient in such a state of mind that he would refuse to continue with this treatment.

Renal Elimination of Bacteria Injected in Blood.—Ligus experimented on rabbits inoculated with bacterial broth cultures directly in the left ventricle or in the marginal vein of the ear. The bacteria administered were staphylococci streptococci, pneumococci and bacilli of the coli and paracoli groups, in doses of about 1,000 bacteria for each kilogram of body weight. The urine was withdrawn by puncture of the bladder at intervals which varied from three minutes to ninety-six hours after inoculation. The sterile quality of the urine was verified before the inoculation. Cultures were made from the urine, bile, blood, kidney and spleen of the animals that died spontaneously or were killed. The different bacteria were identified. The author concludes that the kidney eliminates bacteria as though it were an inert body for the first forty-five minutes.

EXTRINSIC ANTENATAL INTESTINAL OBSTRUCTION AT THE ILEUM, WITH PERITONITIS

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The following case, because of its rarity, appears to be worth reporting. Ladd says, "This condition is rare enough so that it is likely to escape the mind and it is common enough to be important." Most of the references available were based upon autopsy reports.

Mrs. G., age 23, Gravida 2, Para 1, was delivered at term of a female infant April 5, 1939. Family History. Obstetrical History and Prenatal. Mr. and Mrs. G. were normal, healthy individuals with negative Wassermanns. Mrs. G. had a spontaneous abortion at three months in 1937. This whole prenatal period was normal and uneventful, except on March 25 and April 3, I have on my prenatal record the note, "Small baby. Polyhydramnios."

Details of labor: Membranes ruptured before the patient entered the hospital, so we were unable to determine the amount of hydramnios. Vertex presentation; first stage three and one-half hours, second stage thirty minutes, third stage twenty minutes. The placenta was expelled by expression and was intact. Edema of the foetal surfaces.

The child: Spontaneous delivery, cried vigorously and passed urine and meconium at birth. Weight 2300 grams (about five and one-third pounds). Very dehydrated with sunken fontanelle, and pinched facies. The skin of the abdominal wall had a faint pink discoloration, which Shaw describes as a "purpuric rash," extending from the symphysis to the costal margin, on the right side. The abdomen was markedly distended, though the distention was not sufficient to obstruct labor, the abdomen being one centimeter larger in circumference than the circumference of the head at its largest measurement. There was no visible peristalsis, no masses were seen or felt. On rectal examination the finger entered the anus and passed into the rectum without difficulty. The temperature was 90° F. The heart and lungs were normal.

The child was given by mouth and retained one-half ounce of water at seven hours of age. At this time it had another meconium stool. Eleven hours after birth, at which time milk was given, it had a third and last meconium stool. Eighteen hours after birth vomiting began. At first the vomited mater-



Figure I.

Flat films taken in prone and upright positions show a large dilated loop of bowel extending from the pelvis upward into the right in the region of the cecum.

ial was clear. This soon became bile tinged and was projectile in type. The distention increased, the discoloration on the abdominal wall became a deep dark red, peristaltic waves were visible. A saline enema was given with no result. Parenteral saline and glucose were given.

Pediatric consultation was sought. Dr. Harry S. Andrews saw the baby at this time, twenty-six hours after birth.

Laboratory report: Hb. 98%, R.B.C. 4,770,000 (Normal 5-6 Million), W.B.C. 5000 (Normal 15-25 Thousand).

Neutrophils 82%, Lymphocytes 14%, Monocytes 3%, Normoblast 1%. The meconium was not examined for keratinized epithelium.

The infant was prepared for operation by giving one hundred cubic centimeters of ten per cent glucose in saline by the subcutaneous method.

Under chloroform anesthesia, the abdomen was opened by Dr. Wallace Frank. The age of the child was 38 hours. On opening the abdomen the picture was very confusing. There

was marked edema of the abdominal wall, and the peritoneum was thickened. The cecum and the colon were greatly distended. The small intestine was very congested, with a thin exudate plastering the coils together. A large loop of the ileum was gangrenous. Because of the condition of the child, nothing more than a colostomy, and an enterostomy above the site of the obstruction, was done. The wounds were closed with through and through sutures.

The immediate post operative condition of the child was remarkably good. Supportive measures were used. Oxygen, blood transfusions and frequent subcutaneous solutions of saline and glucose. Breast milk was given by mouth.

Eighteen hours post operative, a slight generalized jaundice was noted. The child rapidly grew weaker. The jaundice increased. There was profuse capillary bleeding from around the wounds. Expired April 10. Five and one-half days post natal and four days post operative.

Autopsy notes from Dr. Weeter's report:

On opening the abdomen the intestines were found to be markedly distended, adherent to the abdominal wall and also adherent to each other by plastic adhesions. These could easily be separated but the gangrenous intestines tore quite readily, making complete dissection impossible.

The large intestine was much distended, but the distention was apparently gas. The small intestine was rotated on the mesentery through an angle of about 180°. The intestine has a green grayish color and is partially filled with a brownish yellow fluid. To some extent this has been drained through surgical procedure.

In the lower abdomen, approximately in the middle but slightly to the right, there is a short thick band through which the small intestine passes. This is quite evidently a congenital defect resulting in pressure on the small intestine. This obstruction involves the lower portion of the ileum. The dilatation of the large intestine from the observations made, is an ileus resulting from peritonitis.

The liver has a dark red color. It extends two finger's breadth below the right costal margin. The remaining organs are not remarkable.

Final report antenatal intestinal obstruction. Strangulation of the lower portion of the ileum by a fibrous band, probably remains of the vitelline artery connecting the bladder and mesentery.



Figure II.

Barium enema: Barium flows freely throughout the entire colon without evidence of obstruction. No barium passes the ileocecal valve.

SUMMARY

1. A discoloration over the lesion, or so-called "Purpuric Rash," is thought by Shaw to be symptomatic of peritonitis in the late stage in these cases.

2. This case is interesting from an obstetrical standpoint, in that foetal abnormalities occurring with polyhydramnios is well known. The abdominal distention has been reported of sufficient severity to obstruct labor.

3. From a medical standpoint the case presents several features of interest. We would classify this as the extrinsic type of obstruction. Ladd claims that this type is always dependent upon a faulty or incomplete rotation of the bowel. This rotation begins by the twelfth week intra-uterine life. We know the obstruction occurred in utero, the child being born with signs of obstruction and peritonitis. How long this antedated birth it is hard to say. At first probably it was only partial, as we know the colon was developed, and it contained meconium. Although it is admitted that barium should not be used above a suspected obstruction, we felt that we were justified in using it, as we had planned to open the abdomen imme-

diately. These obstructions are often multiple and we thought to save valuable surgical time by knowing the exact location of the lesion and establishing the patency of the rest of the intestinal tract.

4. From a surgical standpoint, the chance of the survival of these infants is very remote, though surgery offers the only hope. The infant is a poor surgical risk and cannot survive a long operation or much manipulation. An enterostomy will give temporary relief, but infants do not survive an enterostomy more than a few days. Ladd thinks that in all cases an anastomosis should be done. He says that it is usually the tendency of the surgeon, because of the condition of the child, and the time involved, to think that an enterostomy is the method of choice. He claims that in reality the exact opposite has been proven true. That a primary anastomosis is the operation of choice. At best he only re-



Figure III.

Barium by mouth through a tube: The stomach is normal in size, shape and position. The pylorus opens readily and demonstrates a normal duodenal loop. When the barium passes over in the jejunum in the left abdomen the jejunum gradually dilates. At the end of four hours, no barium passes into the small bowel in the right abdomen, where the dilated loop of gas filled intestine was noted on the flat film.

Conclusion: Obstruction in the small bowel as it passes from the left abdomen to the right abdomen.

ports a survival of 10% in these cases. No report could be found of a survival after the gut had become gangrenous. Local infiltration is usually the anesthetic of choice.

5. The normal embryologic development of the intestine must be understood to have a comprehension of this case. These factors in the development will be reviewed by Dr. Harry S. Andrews.

6. A case of extrinsic antenatal intestinal obstruction at the ileum, with peritonitis has been presented.

DISCUSSION

Malcom Thompson: I have never had the misfortune to see one of these cases so I can only tell of what I have read in the literature. The mortality record in the United States and the rest of the world is almost one hundred per cent. A few clinics which are particularly interested in the condition have reported recoveries of ten per cent or better, notably Ladd at the Children's Hospital in Boston and Morton at the University of Rochester in New York State.

One important factor in the diagnosis of intestinal obstruction regardless of the age of the individual must be clearly understood if the mortality is to be reduced. If this factor is not understood attending physicians are often deluded into a false sense of security when confronted with a case of intestinal obstruction. That is, in the early stages of acute mechanical intestinal obstruction, the temperature, pulse rate, and blood count are normal. It is difficult to conceive that an individual can suffer from such a serious condition and not have some change in the temperature, pulse, or blood count but such is usually the case.

According to Ladd, there are two types, the intrinsic and the extrinsic. The intrinsic is brought about by the act that at a certain stage in intrauterine life the duodenum and other small intestines are normally occluded. At approximately the eleventh or twelfth week this occlusion is broken down, but if it fails to be broken down as it rarely is, there will be intrinsic obstruction. This obstruction may be single or multiple and may occur in any part of the intestinal tube. When a child is born with this obstruction it must be operated upon immediately. The proper operation is an anastomosis around the obstruction. This is contrary to the usual practice in adults as we know that an anastomosis in an adult in the presence of distended intestine carries an extremely high mortality. But in infants, just as Dr. Hatfield pointed out, enterostomy is not borne well and must be avoided.

The extrinsic is caused by faulty fixation of the ascending colon which permits the small intestine to swing too freely in the abdominal

cavity leading to the development of volvulus. The volvulus may be present at birth or may develop later and is usually in a clockwise direction. The volvulus must be corrected by surgical operation, the intestines removed from the abdomen and unwound, and the abnormal fixation corrected so the volvulus will not occur. If the abnormal fixation is not corrected the volvulus will almost certainly recur, frequently within a few days. Obstructing bands such as were present in Dr. Hatfield's case can be relieved by dividing the bands provided they do not contain arteries or veins or other important structures.

H. S. Andrews: The alimentary canal is derived from the entoderm. Later it becomes enveloped by a layer of mesoderm which forms an outer peritoneal covering and an inner muscle and submucous layer. It is attached caudally with the mouth and distally to the anus. The tract is divided into the foregut which extends from the esophagus to the duodenal papilla. Its blood supply is from the celiac axis and its function is chiefly that of digestion. The midgut extends from this point to the middle of the transverse colon. Its blood supply is derived from the superior mesenteric artery and its function is that of absorption. The hindgut is from this point including the rectum but not the anus. Its blood supply is from the inferior mesenteric artery and its function is chiefly excretion.

The midgut in the early development is a convex loop and is supplied throughout by the common dorsal mesentery. Until about the end of the third week the midgut communicates with the yolk sac through the vitello-intestinal duct. After this time this duct should normally close. If it remains open the anomaly is known as a persistent vitello-intestinal duct and Meckel's diverticulum may occur. In the fifth week the midgut is herniated with a loop through the umbilical orifice due to the rapid development of the liver. This gives the liver room to develop. From the end of the fifth week to approximately the tenth week this herniated loop begins to rotate. The rotation is counter-clockwise and it is at this stage that variation in the development begins. At about the beginning of the eleventh week the gut begins to return to the abdomen.

During the process of the rotation the upper portion of the gut returns first, with the colon and cecum returning last. This rotation occurs around an axis made of the superior mesentery artery. The mesentery of the colon and small intestine is divided into pre- and post-arterial positions. The pre-arterial part is attached to the colon and a small amount of the terminal ileum. It rotates through an arc of approximately 45 degrees. The post-arterial part rotates in the same direction in about the same axis

but it goes through an arc of 270 degrees. Thus, it comes behind the artery, which accounts for the duodenum appearing behind the superior mesenteric artery. The anterior part of the colon follows behind the rotation of the small intestine reaching its position after the small intestine. In the last stage of development the colon descends to the normal position and fusion takes place; that is, the attachment of the mesentery to the posterior wall along an oblique line to the left of the top of the third lumbar vertebra to the right sacro-iliac point and the mesocolon to its position against the right iliac fossa. This process takes place from the tenth week on and may even take place after birth. An incomplete rotation of the midgut may give a variety of congenital anomalies.

Therefore, in brief, the process of development of the midgut is divided into three stages, the first stage from the fifth to tenth week while the loop is rotating and going back into the abdomen and the third stage from the eleventh week until birth or even later while the loop becomes fixed and the mesenteries fuse.

The danger of the first stage is extroversion of the cloaca where rotation is interfered with as well as the mid- and hindgut. This anomaly is not compatible with life and can be promptly forgotten.

The dangers of the second stage are:

1. Non-rotation of the midgut loop with the small intestine lying just to the right of the midline. The cecum lies in the left iliac fossa and is reversed so that the ileum enters it from the right. The ascending colon passes up and into the left. Here adhesions may produce obstructions in the small intestine and the proximal half of the colon remains suspended by a narrow pedicle.

2. The second danger of this stage is the reversed rotation of the midgut. That is, there is a clockwise rotation through an extent of approximately 90 degrees. In this condition the transverse colon is behind the mesenteric artery and the duodenum in front. The other intestine is normal except that its anterior and posterior surfaces would be reversed. Here the possibility is for obstruction of the transverse colon.

3. The third is the malrotation stage. A number of abnormalities can result from this variation if the small intestine passes in front of the vessels to lie on the right side with the cecum in a high position in the region of the pylorus so that the duodenum and the ileum may lie close together. The small intestine may also remain entirely on the right side of the artery where again the cecum and colon are

prevented from reaching the right iliac fossa producing a long primitive mesentery, making a very likely subject for volvulus.

It is well to remember always the possibility of congenital anomalies in newborn children that vomit, become distended or have no stools. However, it is at times very difficult to make a diagnosis.

The cardinal signs are vomiting, distention, absence of stools, borborymus. However, it is quite possible that they may not appear early. Low obstruction gives vomiting quite late with distention and constipation early. In high obstruction the reverse is true, vomiting is early. There is later on distention and the stools will be present until the material below the point of obstruction is evacuated. X-ray studies of the gastro-intestinal tract with barium enema and manipulation of the abdomen, under the fluoroscope preferably, is very important. It is probably not advocated to give barium above except in instances where no information can be obtained by other methods.

THE PATHOGENESIS OF THE ANEMIAS: ANEMIA AS A PROBLEM FOR THE INTERNIST

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The internist frequently is consulted by patients with a chief complaint of "anemia." It behooves him, therefore, to be familiar with the clinical and hematologic manifestations of the anemias. The most common types of anemia are the microcytic and the macrocytic varieties. These differ as to cause and treatment. It is economically wasteful and scientifically unsound to treat them on a mass prescription basis by the administration of a combination of hematopoietic substances. This discussion is, therefore, devoted to a consideration of some laboratory methods by which the microcytic and macrocytic anemias may be differentiated.

The terms microcytic and macrocytic refer to red cell size. There is a partial correlation between the size of the erythrocytes and their hemoglobin content. This is reflected in a current hematologic nomenclature. An anemia is microcytic if there is an increase in the percentage of erythrocytes having a diameter less than 6.8 microns and macrocytic if there is an increase in erythrocytes with a diameter greater than 7.5 microns. An anemia is hypochromic if the red cells show a reduction in their hemoglobin content; normochromic if the erythrocytes are saturated with hemoglobin; hyperchromic if

the erythrocytes, by reason of their increased size, carry more than the usual amount of hemoglobin. The laboratory procedures necessary to determine in which category a specific anemia should be placed are relatively simple. They are as follows:

1. An accurate red blood cell count.
2. An estimation of the hemoglobin, preferably stated in grams per cent.
3. A determination of the color index.
4. A determination of the size of the erythrocytes.
5. A determination of the mean corpuscular volume.
6. A determination of the mean corpuscular hemoglobin concentration.

It is not necessary to detail the methods for the enumeration of the erythrocytes or the determination of the hemoglobin. Hemoglobin determination should be made by employing a reliable method (Newcomer, Haldane or Sahli). The method used should be a part of the clinical record because the percentages obtained by these and other methods are based upon different standards. The arbitrarily fixed "normal" values are as follows: Haldane 105 per cent, Sahli 85 per cent, 14.5 grams per cent, 100 per cent normal.

Color Index: By color index we express the ratio between the percentage of hemoglobin compared to the normal 100 per cent and the percentage of red cells compared to the normal 100 per cent. It expresses the mean hemoglobin content of a single erythrocyte as compared to the hemoglobin content of a "normal" red cell. If the hemoglobin is determined by Haldane's method, the percentage so obtained is directly available for calculation of the color index. The Sahli percentage figures must be adjusted according to the equation 85 percent equals 100 per cent normal. Similarly, if the hemoglobin is expressed as grams per cent, the equation becomes x over 14.5 \times 100 normal. The color index depends in part upon cell size and in part on hemoglobin content. Thus an index greater than 1 is indicative of a macrocytic anemia, with the single exception that in the

rare condition of spherocytosis (acnoluric jaundice) the color index also is increased. An index less than 1 is not pathognomonic of a microcytic anemia since it may occur also in normocytic and, occasionally, even in macrocytic anemias. The information obtained by this index is only a crude method for the differentiation of the microcytic from the macrocytic anemias.

Determination of Cell Size: This is a tedious and time consuming procedure. It entails the direct measurement of the diameters of several hundred cells in a thin, evenly spread, stained blood smear. The values thus obtained are plotted graphically according to the methods of Price-Jones. From a practical standpoint this information is not of sufficient value to offset the time and effort required for its acquisition. The method is applicable only in laboratories especially devoted to hematologic diagnosis and research. Pijper devised a diffraction method by which the diameter of the erythrocytes may be obtained quickly and easily. The method has been modified (halometer methods). The diffraction methods, however, determine only the modal mean diameter of the erythrocytes, corresponding to the peak of the Price-Jones curve, and are open to several sources of error. Information equivalent to that obtained by the Price-Jones method is readily available by determining the mean corpuscular volume of the red blood cells.

Mean Corpuscular Volume: This expresses the average volume of a single red cell in cubic microns. It is determined by centrifuging an exact amount of venous blood, to which an anti-coagulant has been added in a calibrated tube (Wintrobe hematocrit) until all the red cells are closely packed. The volume of the packed red cells is read from the graduated scale etched on the tube. This figure expresses the total corpuscular volume per 100 cc. of whole blood. It is an absolute figure and averages 42 cc. per cent for women, 47 cc. per cent for men. To determine the mean corpuscular volume the total volume is multiplied by 10 and divided

TABLE I.

	M.C.V. Cu. Microns	M.C.H.C. %	Cell Diameter Microns	Therapeutic Indications
Normal Values	78-94	33-38	6.7-8.0 av. 7.2	
Macrocytic anemia e. g. Pernicious anemia, Sprue, etc.	95-160	31-35	7.5-9.6 av. 8.0	Liver preparations
Normocytic Anemia, e. g. Acute hemorrhage	80-94	33-38	6.7-8.0 av. 7.2	Correction of cause Transfusion
Simple microcytic Anemia, e. g. Chronic infection, nephritis, Cachexia, etc.	72-79	30-33	6.5-7.5 av. 6.8	Removal of cause
Hypochromic microcytic Anemia, e. g. Chronic hemorrhage, "Idiopathic" Hypochromic Anemia	50-71	21-29	6.0-7.0 av. 6.5	Iron in large doses

by the number of red cells in millions per cubic millimeter, or M. C. V. equals Hematocrit $\times 10$ over R. B. C. in mill. Example. If the corpuscular volume of a given sample of blood is 42.5 cc. per cent and the red count is 4.8 million per cubic millimeter, the mean corpuscular volume (M. C. V.) is 42.5 over 4.8, equals 8.85. The normal range is 78-94 cu. microns, average 86 cu. microns.

In macrocytic anemias the mean corpuscular volume varies from 95 to 160 cu. microns. In microcytic anemias the volume of the packed cells is low as would be expected, because of the diminution in cell size. If the microcytic anemia is of the "simple" type, such as is commonly associated with chronic infections and gastro-intestinal disease, the erythrocytes are reduced to a greater extent than in the "idiopathic" hypochromic anemia associated with achlorhydria (Wintrobe). The mean corpuscular volume in simple hypochromic anemia is, therefore, not as low as in the achlorhydric type of hypochromic microcytic anemia (Table I). The clinical importance of this difference is evident when we recall that the simple hypochromic anemia responds better to iron therapy if the cause of the anemia is removed, while iron is a specific remedy for "idiopathic" hypochromic microcytic anemia. The method is also of value in certain obscure cases of pernicious anemia where the diagnosis is in doubt because the anemia is slight or moderate, and overshadowed by the neurologic manifestations. The finding of a high mean corpuscular volume in such a case establishes the diagnosis of macrocytic anemia. Furthermore, response to liver therapy is accompanied by a gradual return of the mean corpuscular volume to the average normal value, thus affording an additional and objective index to the favorable progress of the patient.

Mean Corpuscular Hemoglobin Concentration: This expresses the relationship between hemoglobin saturation and cell volume. It is determined by dividing the amount of hemoglobin, expressed in grams per cent, by the volume of packed red cells expressed in cubic centimeters per 100 cc. of whole blood, and multiplying the result by 100. The equation may be written

M. C. H. C. Hemoglobin $\times 100$ over Hematocrit.

It enables us to calculate the degree of hemoglobin saturation of the cells as distinct from that of the whole blood. For example, if a patient has a hemoglobin value of 12 grams per cent and a corpuscular volume of 40 cc. per cent, his M. C. H. C. is 12 over 40 $\times 100$, 30 per cent. The normal values are 32-38 per cent average 34 per cent. The mean

corpuscular hemoglobin concentration represents the actual hemoglobin concentration of the cells and is therefore an exact indicator of the degree of iron deficiency. It is the key to iron therapy.

SUMMARY

The microcytic and macrocytic anemias constitute the majority (90 per cent) of the anemias seen in clinical practice. They may readily be differentiated by a few simple laboratory procedures, which are discussed. These methods also provide an objective measurement of the therapeutic value of hematopoietic substances.

BOOK REVIEWS

PROBLEMS IN PRISON PSYCHIATRY, by J. G. Wilson, M. D., senior surgeon (retired) U. S. P. H. Service, Director Division of Hospitals and Mental Hygiene, Department of Welfare, State of Kentucky, and M. J. Pescor, M. D., Clinical Director U. S. P. H. Service, Fort Worth, Texas. The Caxton Printers, Ltd., Caldwell, Ohio. Price \$3.00.

Wardens have written books about prisons and prisoners; prisoners have recounted their experiences, and an endless number of armchair criminologists have produced textbooks showing erudition and more or less insight into the problems involved. Prison physicians have also added their quota to the overflowing library shelves in the departments of sociology and abnormal psychology, but this is the first attempt to classify the prisoner on a purely psychological basis, describe in detail the effects of prison life upon character, recount the approved methods in vogue for mental and moral rehabilitation, set forth the difficulties to be overcome, and evaluate the results in logical conclusions presented in a readable and interesting manner within the covers of a single volume.

Extensive theoretical training in sociology, criminology, psychology, medicine and psychiatry, many years of practice in the mental aspects of public health followed by six years' experience as chief medical officer and psychiatrist in penal and correctional institutions, have made the authors admirably equipped for the work they have undertaken.

PRIESTS OF LUCINIA, The Story of Obstetrics, by Palmer Findley, M. D., F. A. C. S., published by Little, Brown & Co., Boston, Mass.

Lucinia was the Greek goddess of childbirth and this volume is an outstanding

history of medicine and obstetrics from the earliest times to the present day.

The first two chapters are devoted to Primitive Midwifery and Obstetrical Practices in the Orient and in view of the dense ignorance prevailing these were crude indeed. Ignorant even as to the method of conception and with no knowledge of the anatomy, all deliveries were conducted by ignorant female attendants and all kinds of abnormal and superstitious practices were indulged in.

Then came the age of Hippocrates and Galen with but little advancement made on account of the lack of anatomical knowledge due to the ban upon dissecting human beings.

We come to real progress in Obstetrics in the 16th and 17th centuries with practically the first books teaching the subject available.

Then appeared the outstanding masters of obstetrics, Harvey best known for his discovery of the circulation of the blood but also the first to present embryology through the development of the chick in the egg.

Next with the advent of Ambrose Pare, who introduced the ligature and popularized Pedalic Version, Obstetrics became a science.

The secret of the forceps long held in the Chamberlain family became available. Pelvic and fetal head measurements correlated by Bandeloeque advanced our knowledge. Naegele gave us the method for calculating the probable time of onset of labor. Crede taught the expression of the placenta and the prophylactic treatment of the eyes for the prevention of Ophthalmia. Holmes and Semmelweis simultaneously discovered the cause of puerperal fever and thus we gradually advanced to the knowledge of today. The long process of establishing the anatomical features of the subject due to the ban on dissection is described. The forceps and their improvements culminating in the Tarnier and Piper of the present day.

The evolution of the Midwife from the slattern of the early days to the intelligent trained female attendant of the present with final chapters on Puerperal Fever and Caesarian Section from the early connection to present day knowledge the book comes to a close.

It is an exceedingly painstaking and complete history of obstetrics and an interesting biography of all the distinguished men and women who contributed to the advancement in our knowledge of this subject.

The book is written in a highly entertaining manner and should prove of great in-

terest not only to all obstetricians but to every doctor interested in the history of medicine.

TREATMENT BY DIET: By Clifford J. Barborka, M. D., B. S., M. S., D. Sc., F. A. C. P. Department of Medicine, Northwestern University Medical School, Chicago: Formerly Consulting Physician, The Mayo Clinic. Fourth Edition, Revised 1939. J. B. Lippincott Company, Philadelphia, Pa., 642 pages illustrated, \$5.00.

The essentials of diet in health including a discussion of the vitamins as well as the other essentials of the complete diet are included in the first chapters. Part 3 covers diet in diseases and includes diets for diabetes mellitus, gout, overweight, underweight, nephritis, diseases of blood, diseases of digestive tract, constipation, deficiency diseases and in the sub-section takes up conditions in which diet is of varying importance, including diet in skin diseases and foot allergies.

The appendix contains only a very small number of tables showing average composition of commonly used foods and a few recipes for diets. The bibliography is rather extensive.

MEDICAL JURISPRUDENCE AND TOXICOLOGY, by William D. McNally, A.B., M.D., Assistant Professor of Medicine and Lecturer in Toxicology, Rush Medical College, University of Chicago; Attending Toxicologist, Presbyterian Hospital; Attending Staff, St. Joseph's Hospital, Chicago. 386 pages with 23 illustrations. Philadelphia and London: W. B. Saunders Company, Philadelphia, Pa., 1939. Cloth, \$3.75 net.

A practical book on Medical Jurisprudence and Toxicology which will be useful to students of medicine and pharmacy as well as to the practicing physician. The first part of the book stresses medical legal facts that should always be kept well in mind in the giving of expert medical testimonies. The medical legal aspects, causes of death and injuries and methods of identifying the dead are discussed in detail. A good portion of the book is devoted to Toxicology. Various poisons are identified according to type and attention is given to gasses, organic and inorganic poisons, heavy metals, food poisonings and food borne infections.

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NEXT MEETING: LEXINGTON
1940

EDITORIALS

THE 1939 MEETING

Another of the annual mile-posts which denote the evolutionary progress of the practice of medicine in Kentucky, has been passed. The eighty-ninth session of the Kentucky State Medical Association at Bowling Green was noteworthy in many respects. The attendance was smaller than for a number of years which was probably due to the extremely hot weather, which was also responsible for keeping a smaller group of those registered in the meetings of this session. As was noted in the official program, this meeting memorialized Dr. Charles Harvey Spilman of Harrodsburg, the fourth President of this Association. It is interesting to note that Dr. Spilman was the uncle of our President, Dr. John W. Scott, whose thought-provoking address was one of the outstanding features of the session.

Dr. W. E. Gardner, the retiring President, presented to the House of Delegates a splendid report of the constructive activities of his regime. A very scientific program had been arranged by the Committee on Scientific Work for which Dr. Scott characteristically gave most of the credit to Dr. Charles N. Kavanagh. An innovation was the presentation of four guest speakers each of whom made a contribution which will be long remembered by those who heard them. In addition to a scientific paper on Tuesday afternoon. Dr. Roger I. Lee, of Boston, delivered the annual oration, his subject being "Medical Prophecy," to a perfectly delighted audience. Dr. Lee is an outstanding figure in contemporary medicine, a Trustee of the American Medical Association and a Fellow of Harvard University. The fine good humor and sound common sense optimism of Dr. Lee's oration ranks it with the greatest of those which have been delivered before the sessions of this Association.

Following Dr. Scott's address at the Annual Banquet on Wednesday, Dr. Louis Hamman of Johns Hopkins held a clinical pathological conference, the earnestness and thoroughness of which in the language of President Scott "held the audience's attention more closely than most popular orations."

During the Thursday session, Dr. Donald Guthrie, of Sayre, Pennsylvania, and Dr. Milton Cohen, of Cleveland, Ohio, made splendid scientific contributions, the one on "Cancer of the Breast" and the other on "Newer Concepts of Allergy," both of which will be reprinted in the JOURNAL later and read with interest by our members.

The Annual Oration in Surgery by Dr. H. Arnold Griswold was a classic. Basing his remarks on the time-worn but most important subject of the treatment of fractures on the principles of Hippocrates, he left nothing unsaid which is of importance in the care of one of the most important conditions confronting all practitioners of medicine. The Oration in Medicine by Dr. E. B. Willingham entitled "Infections as the Etiological Factor in Heart Disease" was delivered with an earnestness and authority which comes from a broad experience in a particular field of medicine.

To enumerate the other scientific papers would be only to favorably mention each essay which was delivered, as these will enrich the future issues of the JOURNAL. Those of our members who were absent will realize how much they missed by not hearing them delivered with the personal magnetism and authority of their authors.

The essay by our former President, Dr. John H. Blackburn, was one of those philosophic dissertations which may only be prepared and delivered by a sage in medicine.

The proceedings of the House of Delegates were of the utmost importance and we trust, will be read by every member of the Association. All committees prepared constructive reports which received the attention their importance demanded. The Report of the Committee on Medical Economics, containing a very large amount of factual data was accepted, with the elimination of its recommendations which will be found on pages 28 and 29 of the published report, and the Committee was instructed to continue its studies.

Dr. Austin Bell received merited distinction when he was unanimously made President-elect. The Vice-Presidents are Drs. George H. Gregory, Versailles, A. Clayton McCarty, Louisville, and Eldon W. Stone, Bowling Green. Dr. Virgil E. Simpson was re-elected as delegate to the American Medical Association. Dr. Allen E. Grimes, Lexington, was selected as the orator in surgery and Dr. Oscar O. Miller, Louisville, as the orator in medicine.

Drs. J. B. Lukins, Proctor Sparks and H. K. Buttermore were re-elected as Councilors from the Fifth, Ninth and Eleventh Districts respectively. Dr. Luther Bach, Newport, was elected to fill the unexpired term of Dr. L. C. Hafer, resigned.

The Association will hold its 1940 meeting in Lexington.

THE HOBBY EXHIBIT

The annual showing of doctors' hobbies and art craft at the Bowling Green meeting of the Kentucky State Medical Association was interesting and representative of physicians from different parts of the State.

The exhibit was composed of pictures, oil paintings, photographs, photographic brom-oil transfers with the one exception of a complete collection of Kentucky butterflies and moths. The exhibitors this year were J. G. Wilson, Frankfort, and Nora Dean, Louisville, oil paintings; Marion Beard, Jesshill Love, Louisville, photographs; Hanes Barr, Owensboro, and L. O. Toomey, Bowling Green, photographs; E. C. Romele, Frankfort. Candid photographs of a Robin; R. Glen Spurlings, Louisville. Photograph brom-oil transfers, 3 color brom-oil transfers; J. A. Bishop, Jeffersontown, Butterfly and Moth collection.

Several awards were offered and presented by Jones Apothecary Shop, the Louisville Apothecary, A. S. Aloe Company, Abbott Company, Kelly-Koett Manufacturing Company and Upjohn Company.

Of course it is an open secret that a great many Kentucky physicians indulge themselves in hobbies for the pure relaxation of exercising their inventive genius and nature for producing some original way of expression. The rest of us certainly would like the chance of seeing these pieces of art craft or hand craft, so let's all keep the Hobby and Art Exhibit in mind and contribute toward making it a bigger and better showing next year.

THE LOUISVILLE MEETING OF THE SOUTHERN PSYCHIATRIC ASSOCIATION

Attention is again called to the meeting of the Southern Psychiatric Association to be held at the Brown Hotel, Louisville, Monday and Tuesday, October 9th and 10th, 1939, and to which all physicians of Kentucky and their families are cordially invited.

A previous notice of this meeting, including the names of a few of the prominent speakers, was published in the September issue of the Journal, and before the publication of this second announcement all members of the Kentucky State Medical Association will have received an individual invitation with a complete list of speakers, most of whom are psychiatrists of national prominence. In addition to these it is noted that an address from the standpoint of the internist, will be delivered by Dr. John W. Scott, Lexington, President, Kentucky State Medical Association, and from the standpoint of the surgeon, by Dr. Arnold Griswold, Louisville, Professor

of Surgery, University of Louisville School of Medicine. A large attendance is anticipated.

There will be a subscription dinner at the Crystal Ballroom of the Brown Hotel on Monday evening, beginning at 6:30 p. m., following which there will be an address by Dr. Charles S. Holbrook of New Orleans, President of the Association, in addition to speeches by one or two prominent guests, all of which should add considerable interest to the entire program. Scientific papers will be presented throughout Monday and Tuesday, and the Kentucky Psychiatric Association, which will meet conjointly with the above association, will hold its own business session after the program of the Southern Psychiatric Association has been completed. Notices of the latter meeting, over which Dr. Spafford Ackerly, of Louisville, will preside, will have been sent to all members by Dr. Robert H. Felix, Secretary, Lexington.

THE AMERICAN PUBLIC HEALTH ASSOCIATION

Thirty-five hundred health officers, nurses, engineers, school physicians, laboratory directors and other health specialists will attend the 68th Annual Meeting of the American Public Health Association and meetings of related organizations in Pittsburgh, Pa., beginning Sunday, October 15, and ending Friday, October 20.

Every State in the Union, Canada, Cuba and Mexico will send their health leaders to participate in a scientific program embracing the public health activities of the North American continent.

On Sunday, October 15, the Sixth Institute on Public Health Education begins. The Institute continues on Monday, October 16, and the International Society of Medical Health Officers, and the American School Health Association, the Association of Women in Public Health, and the National Organization for Public Health Nursing also meet. Five conference groups convene on Monday: State Laboratory Directors, State Sanitary Engineers, Municipal Public Health Engineers, Directors of Local Health Service and State Directors of Public Health Nursing.

Six general sessions throughout the week will engage the attention of all delegates. Medical Care, Cancer, Professional Education, the American Way as Seen from Abroad are among the subjects chosen for the general assemblies.

The ten sections of the Association have arranged an extensive series of joint and individual meetings covering topics of interest to health officers, laboratory workers

vital statisticians, industrial hygienists, public health engineers, food nutritionists, child hygienists, public health education experts, epidemiologists and public health nurses.

Other organizations meeting during the week are the Pennsylvania Public Health Association, the Tri-State Food and Health Officials, the American Social Hygiene Association, Delta Omega, and the American Association of State Registration Executives.

An extensive Health Exhibit featuring commercial and scientific displays is an important part of the meeting. The headquarters will be at the William Penn Hotel.

A LOOK BACKWARD AND FORWARD

Under this caption, Dr. J. Arthur Myers, when president of the National Tuberculosis Association, said: "Our methods of treatment have advanced as fast as those for diagnosis. The indications for artificial pneumothorax have extended to the minimal lesion; surgical collapse has been introduced and perfected. The importance of the re-education and rehabilitation of recovering tuberculosis patients has been recognized and these programs are being developed everywhere."

In this paragraph we note that Dr. Myers, first, called attention to the responsibility resting upon the physicians of our country. Diagnosis and treatment belong to the physicians, and it is impossible to carry on a balanced tuberculosis control program unless physicians are aware of their responsibility.

It is also important to keep in mind that being aware of the responsibility accomplishes nothing, unless physicians are equipped and willing to do their part. We recognize the fact that it costs money to get the proper equipment for diagnosing and treating tuberculosis according to modern methods. We are also conscious of the fact that it takes time, patience and study properly to prepare physicians for using modern equipment in preventing, diagnosing and treating tuberculosis as it should be done. We are also keeping in mind that a great majority of tuberculosis patients are on the lower economic level and are unable to pay for the needed services, many of them having to depend entirely upon charity, and that most physicians must earn their living as they discharge their duties; however, the part the physician must play in the great tuberculosis control program is clearly marked and will not be done unless they find a way to do it.

The declining death rate, although in

many instances not supported by an accompanying declining morbidity rate, has caused many of us to feel that the battle against tuberculosis is almost won. This is far from the truth. As long as tuberculosis is the leading cause of death in the active period of life, as long as there are many hundred open cases of tuberculosis in Kentucky, spreading their disease to others because they are not isolated and often trying to live without adequate medical advice, as long as we do not have beds to take all spreaders out of circulation and to care for all tuberculosis patients who need hospital treatment, the battle against tuberculosis is far from being won.

"This is no time," says Dr. Myers, "to relax our efforts. Our program must be extended and intensified. In many parts of the country more sanatorium beds must be provided. No community can hope to solve this tuberculosis program until it has institutional beds available for all who need institutional care . . . as long as there is a single infected person in any community a tuberculosis problem exist that must be combated."

THE STEWART HOME TRAINING SCHOOL

One of the most interesting and valuable institutions in the whole State is the Stewart Home Training School for retarded children, near Frankfort, Ky. It was founded in 1893 by Dr. John Q. A. Stewart who was a president of the Kentucky State Medical Association and nationally known for his work at the Institution for the Feeble-Minded, developed largely under his leadership. His son, Dr. John P. Stewart, is the present director.

Dr. Stewart recently published and distributed a very handsomely illustrated brochure describing this institution. It is located about six miles south of Frankfort on Route No. 35, and nestles among wooded hills and sweeping meadows, an estate of some five hundred acres, the very essence of charm and protection.

There is something about the mentally retarded child which makes a very strong appeal to those engaged in such work, and which, in a measure accounts for the loving care lavished on them by the executive matrons, teachers and nurses at the school. The health, happiness and progress of each individual there is a matter of deepest concern to those in charge. Thus it is that many of the children make remarkable progress and return to their homes prepared to take their places as useful citizens to society, thus bringing happiness to themselves, while

others are glad to remain in their care, and leave if even, with much regret.

ANNUAL MEETING OF ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

The forty-fourth annual meeting of the American Academy of Ophthalmology and Otolaryngology will be held in Chicago October 8-13 at the Palmer House. The Academy will again present its elaborate courses of instruction with more than 100 specialists as teachers; four afternoon programs of motion pictures and a scientific exhibit in addition to its formal scientific program.

There will be one joint session at which Dr. Gorge M. Coates, Philadelphia, will deliver his presidential address and Dr. Burt R. Shurly, Detroit, will be introduced as the Academy's guest of honor for the year and will deliver an address.

At this session a symposium on essential hypertension will be presented by Drs. Albert C. Furstenberg, Ann Arbor, Mich., speaking from the standpoint of the Otolaryngologist; Henry P. Wagner, Rochester, Minn., the ophthalmologist, and Roy W. Scott, Cleveland, the internist.

Two foreign guests will address the section meetings, which will be held on alternate afternoons. These guests are Prof. Joseph Igersheimer, Istanbul, Turkey, who will discuss "The Optic Nerve and Diseases of Hypertension," and Arthur DeSa, Pernambuco, Brazil, who is to speak on "Ethmoiditis."

AN INVITATION

The Inter-State Postgraduate Medical Association of North America extends a very cordial invitation to the members of the Kentucky State Medical Association to attend the International Assembly of the Association to be held at the Palmer House, Chicago, Illinois, October 30, 31, November 1, 2 and 3, 1939.

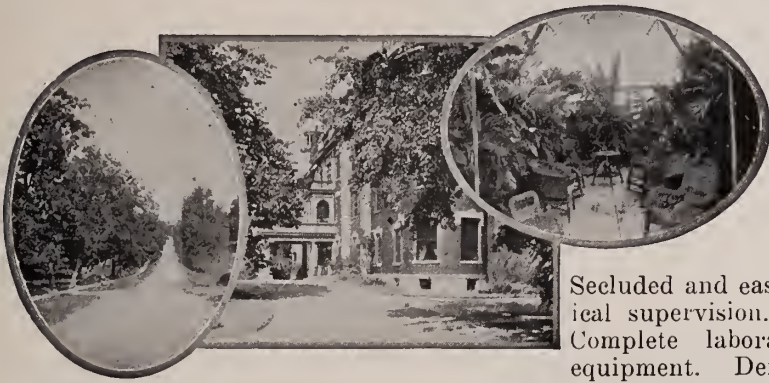
An unusually interesting clinical and didactic program including all branches of medicine and surgery and the specialties has been arranged by the Program Committee.

In cooperation with the Chicago Medical and Illinois State Medical Societies and members of the faculties of the medical universities of Chicago, a most excellent opportunity for an intensive week of postgraduate medical instruction is offered by a very large group of acknowledged leaders in the profession.

Dr. George W. Crile, of Cleveland, Ohio, is President and Chairman of the Program Committee which will insure an instructive meeting.

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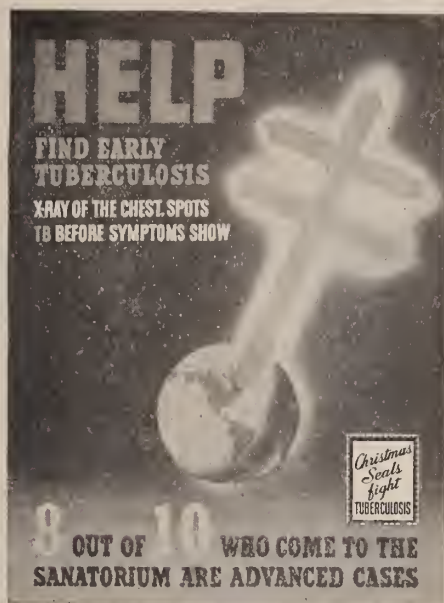
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*Frazer, J. G.: *The Golden Bough*, vol. 1, New York, Macmillan & Co., 1928



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BOWLING GREEN, KY.

NOVEMBER, 1939

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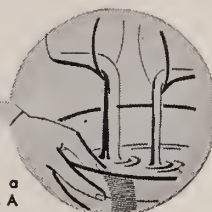


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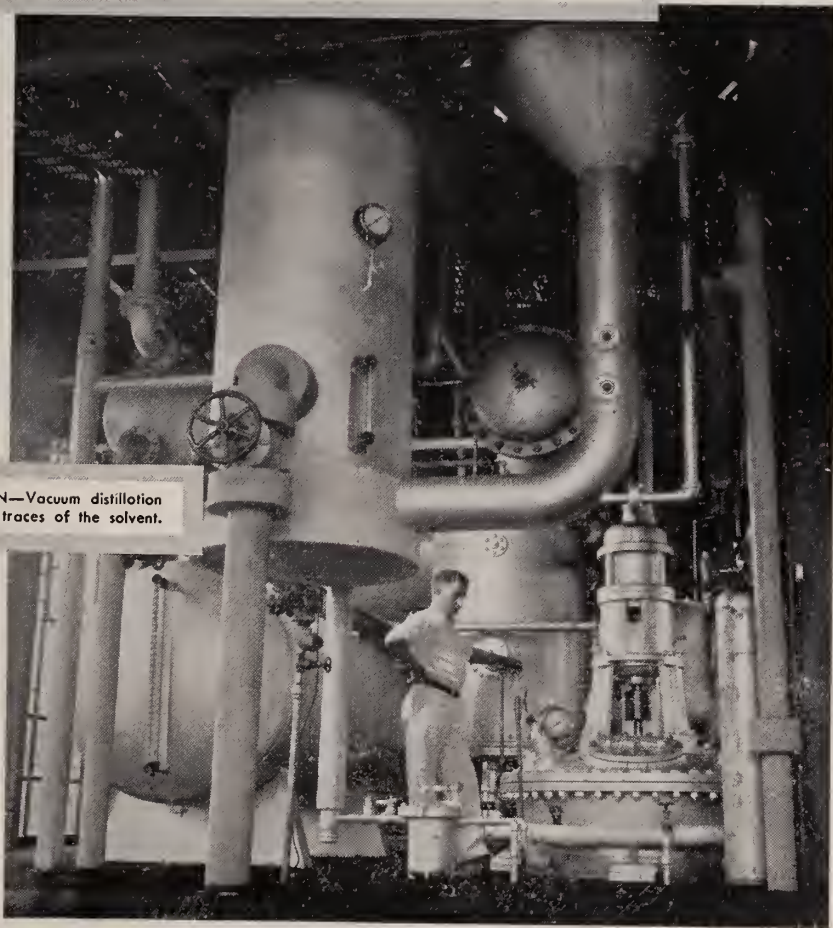


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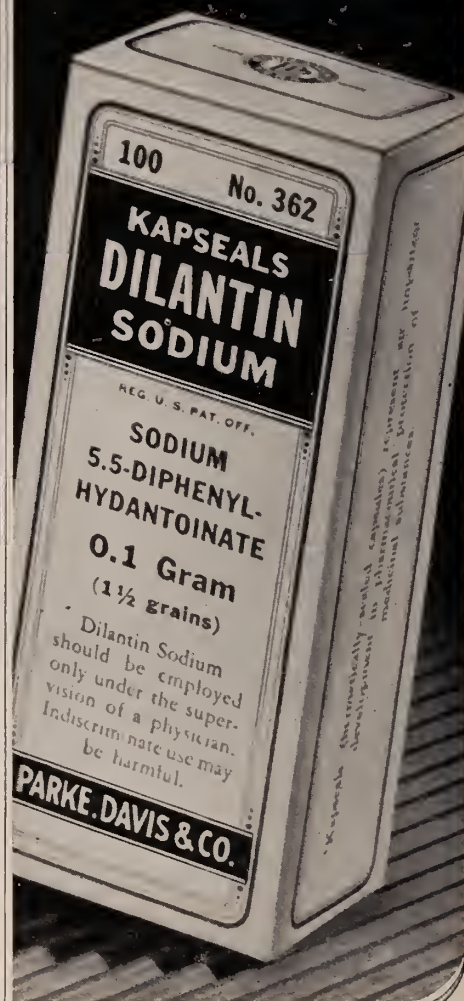
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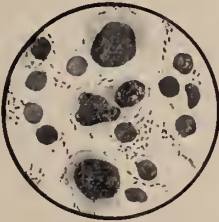
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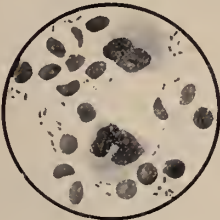
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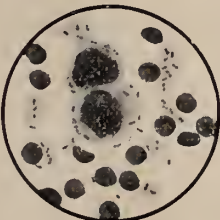
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COUNTY	SECRETARY	RESIDENCE	DATE
Adair	N. A. Mercer	Columbia	November 1
Allen	A. O. Miller	Scottsville	November 22
Anderson	J. B. Lyen	Lawrenceburg	November 6
Ballard	F. H. Russell	Wickliffe	
Barren	Rex Hays	Glasgow	November 15
Bath	H. S. Gilmore	Owingsville	November 13
Bell	E. S. Wilson	Pineville	November 10
Boone	R. E. Ryle	Walton	November 15
Bourbon	Eugene L. D. Blake	Paris	November 16
Boyd	Hubert J. Pritchard	Catlettsburg	November 7
Boyle	P. O. Sanders	Danville	November 21
Bracken-Pendleton	W. A. McKenney	Falmouth	November 23
Breathitt	Philip Bress	Jackson	November 21
Breckenridge	J. E. Kincheloe	Hardinsburg	
Bullitt			
Butler	G. E. Embry	Morgantown	November 1
Caldwell	W. L. Cash	Princeton	November 7
Calloway	Hugh L. Houston	Murray	November 9
Campbell-Kenton	Joseph H. Humpert	Covington	November 2
Carlisle	E. E. Smith	Bardwell	November 7
Carroll	J. M. Ryan	Carrollton	
Carter	Don E. Wilder	Grayson	November 14
Casey	William J. Sweeney	Liberty	November 23
Christian	D. M. Clardy	Hopkinsville	November 21
Clark	R. E. Strode	Winchester	November 17
Clay	J. L. Anderson	Manchester	
Clinton	S. F. Stephenson	Albany	November 18
Crittenden	C. G. Moreland	Marion	November 13
Cumberland	W. F. Owsley	Burkesville	November 1
Daviess	James E. Hix	Owensboro	November 14 & 28
Elliott			
Estill	Virginia Wallace	Irvine	November 8
Fayette	D. E. Scott	Lexington	November 14
Fleming	Roy Orsburn	Flemingsburg	November 8
Floyd	J. G. Archer	Prestonsburg	November 29
Franklin	Grace R. Snyder	Frankfort	November 2
Fulton	J. O. Morrison	Fulton	November 8
Gallatin	J. M. Stallard	Sparta	November 16
Garrard	J. E. Edwards	Lancaster	November 16
Grant	Paul E. Harper	Dry Ridge	November 15
Graves	H. H. Hunt	Mayfield	November 7
Grayson			
Green	S. J. Simmons	Greensburg	November 6
Greenup	R. L. Compton	Greenup	November 10
Hancock	F. M. Griffin	Hawesville	November 6
Hardin	D. E. McClure	Elizabethtown	November 9
Harlan	W. E. Riley	Harlan	November 18
Harrison	W. B. Moore	Cynthiana	November 6
Hart	S. F. Richardson	Munfordville	November 7
Henderson	J. Leland Tanner	Henderson	November 13 & 27
Henry	Owen Carroll	New Castle	November 2
Hickman	Layson B. Swann	Clinton	November 2
Hopkins	David L. Salmon	Madisonville	November 2
Jackson			November 4
Jefferson	W. B. Troutman	Louisville	November 6 & 20
Jessamine	J. A. VanArsdall	Nicholasville	November 23
Johnson	P. B. Hall	Paintsville	November 11
Knoxi			November 25
Knox	W. Parker Clifton	Barbourville	November 16
Larne			
Laurel	Oscar D. Brock	London	November 8
Lawrence	L. S. Hayes	Louisia	November 20
Lee	W. D. McCollum	Beattyville	November 11
Leslie			
Letcher	J. E. Johnson	Jenkins	November 28
Lewis	C. P. Pennington	Vanceburg	November 20
Lincoln	Lewis J. Jones	Hustonville	November 17
Livingston	O. M. Fischbach	Smithland	
Logan	E. M. Thompson	Russellville	
Lyon	H. H. Woodson	Eddyville	November 7
McCracken	J. V. Pace	Paducah	November 22
McCreary	R. M. Smith	Stearns	November 6
McLean	A. R. Will	Calhoun	November 9
Madison	C. B. Billington	Richmond	November 16
Marion	W. E. Oldham	Lebanon	November 28
Marshall	S. L. Henson	Benton	November 15
Mason	C. W. Christine	Maysville	November 8

COUNTY	SECRETARY	RESIDENCE	DATE
Meade			November 23
Maniffee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	November 14
Metcalfe	E. S. Dunham	Edmonton	
Monroe			
Montgomery	D. H. Bush	Mount Sterling	November 14
Morgan			
Muhlenberg	E. L. Gates	Greenville	November 14
Nelson	R. H. Greenwell	Bardstown	
Nicholas	T. P. Scott	Carlisle	November 20
Ohio	Oscar Allen	McHenry	November 1
Oldham			November 7
Owen	K. S. McBee	Owenton	November 2
Owsley			November 6
Perry	W. W. Buckhold	Hazard	November 13
Pike	H. K. Bailey	Pikeville	November 20
Powell	I. W. Johnson	Stanton	November 6
Pulaski	M. C. Spradlin	Somerseset	November 9
Robertson			
Rockcastle	Lee Chestnut	Mount Vernon	November 3
Rowan	A. W. Adkins	Morehead	November 13
Russell	J. R. Popplewell	Jamestown	November 13
Scott	Carl M. Gambill	Georgetown	November 2
Shelby	A. D. Doak	Shelbyville	November 16
Simpson	N. C. Witt	Franklin	November 14
Spencer			
Taylor	W. B. Atkinson	Campbellsville	November 9
Todd	B. E. Boone, Jr.	Elkton	November 1
Trigg			November 29
Trimble			
Union	D. C. Donan	Morganfield	November 29
Warren-Edmonson	W. O. Carson	Bowling Green	November 8
Washington	J. H. Hopper	Willisburg	November 15
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	November 24
Whitley	C. A. Moss	Williamsburg	November 2
Wolfe	G. M. Center	Campton	November 6
Woodford	George H. Gregory	Versailles	November 2

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NOVEMBER, 1939

MINUTES OF THE EIGHTY-NINTH ANNUAL
SCIENTIFIC SESSION OF THE KENTUCKY
STATE MEDICAL ASSOCIATION HELD AT
BOWLING GREEN, SEPTEMBER
11-14, 1939

SCIENTIFIC SESSION

Tuesday Morning, September 11

The opening session of the Charles Harvey Spilman Memorial Meeting of the Kentucky State Medical Association, held in the Library Building of the Western State Teachers' College, Bowling Green, September 11-14, 1939, was called to order at 9:15 A.M., W. E. Gardner, Louisville, President of the Association, presiding.

PRESIDENT GARDNER: The House will come to order. We will have the invocation by the Reverend G. Dewey Kimbel, Pastor of the Westminster Presbyterian Church, Bowling Green.

REV. G. DEWEY KIMBEL: Almighty God, our heavenly Father, we come to Thee at the very opening of this great convention to humbly beseech Thee to pour out Thy richest blessing and benediction upon these men who are giving their lives in faithful service to the healing of humanity. We would ask, O God, that Thou wilt grant unto them Thy wisdom, and as they dedicate their lives with untiring devotion and unselfish sacrifice to this great humanitarian cause that Thou wilt prosper them in their every effort. O Thou Great Physician, we would ask Thee to so guide and prosper their consultation that as they return unto their respective fields of labor, from the inspiration which they have received in these hours of meeting and from the knowledge that they have gained they may be empowered anew to cooperate with all Thy divine laws of healing and to bring comfort and consolation and healing and renewed strength to all of those to whom they minister.

We are mindful that when Thy Son was here in the flesh he went about in

the spirit of one who came not to be ministered unto but to minister and to give his life as a ransom for many, and we pray Thee that under the inspiration of that Great Physician these Thy servants will continue to give of their lives in the healing of the sick, in the unstopping of deaf ears, in the opening of blind eyes. For all that they have done we graciously thank Thee and pray Thy continued blessing upon them, not only in these particular sessions, but as they minister from day to day among their people, and we will give Thee the praise. In Jesus' name. Amen.

PRESIDENT GARDNER: Next in order is the address of welcome, by Dr. John H. Blackburn, Bowling Green, Past-President of the Kentucky State Medical Association, and a member of the Kentucky State Board of Health. (Applause.)

ADDRESS OF WELCOME

J. H. BLACKBURN, Bowling Green: Mr. President, Members of the Kentucky State Medical Society, and Friends of Medicine in Kentucky: I recall that last year when an invitation was extended to the Kentucky State Medical Association that invitation was accepted with considerable celerity and alacrity, and when nobody else asked you folks to come I understood then why you were so anxious to come to Bowling Green.

I was a youngster in a nearby town where we had a saying that there was a Sunday school teacher who was always starting out on Sunday mornings with his shoes polished up and his appetite whetted to be ready to go to anybody's house, and we always said, "Now if you don't want Ed don't ask him." Gentlemen, if we hadn't wanted you last year we wouldn't have asked you, and we are pleased this morning in the name of the Warren County Society to welcome you folks to Bowling Green.

You have been all over the state. When you have gone to Paducah or to Owens-

boro, well, you have had a little more river down there, the Ohio is a little wider than our Big Barren is up here, but it isn't a bit more beautiful, and above that, we have right here as our starting point the hill of Western State Teachers' College. If you go over to Murray, Kentucky, you may have a few more pine trees, you haven't got the hill we have up here. This is the most beautiful spot in Kentucky, we believe. (Applause.) If you are in Murray you are in proximity to Golden Pond and some other places over there between the rivers, but I want to tell you right now that the Golden Pond Golden Dew isn't a bit better than the Nolan River knockout drops. We have it all right here, and in addition to that we still have this hill. If you go over to Mayfield for any reason, you won't get a much better baseball club than we have right here in Bowling Green; they are running neck to neck. If you go up to Louisville you will get more skyscrapers, probably, than we have in Bowling Green, but if you had had this hill up in Louisville in the flood you wouldn't have had a bit of trouble taking care of the people. If you go over to Lexington there are fast horses and goodlooking women and long shots and daily doubles, but the losses over there, gentlemen, are a good deal more (probably Charlie Vance could certify to that) than they are in Bowling Green, and you know Lexington doesn't have a hill like this one to look down from. If you go over to Richmond, I don't know but one thing that Richmond could boast of that is superior to Bowling Green; she may have a better looking President for Eastern Normal than we have for Western, but Lord knows he isn't a bit better than Paul Garrett. If you go up to Harlan what do you find up there? You have some hills up there, you find lots of coal, and you find a good many indictments, probably more than we have here, but still Harlan doesn't have a hill like this one to welcome you to.

We have done the best we could with our committees to make you folks have a good time. You are here; we have no latchstring, the latchstring was cut off and the door thrown wide open. If you want anything ask for it.

A colored brother was preaching and he took as his text (I know this is so because I looked it up last night and it is

referred to in Matthew a good many times): "They shall be cast into outer darkness and there shall be weeping and moaning and gnashing of teeth," and he iterated and reiterated that "there shall be gnashing of teeth," and finally down below him one of the brethren raised his hand and said, "Parson, Ah wants to ask you a question."

He said, "All right, what is it?"

"What about us folks dat ain't got no teeth?"

The parson said, "Don't worry, brother, don't worry, teeth will be provided." (Laughter.)

If you folks are here without your store teeth we will provide the teeth so you can enjoy our luncheons and our burgoos.

Just one more thing to assure you of our welcome. We have a WPA project downtown, a jail that is nearing completion. If you folks don't get in too big a hurry and don't come to us for another nine years I can assure you that that jail will be open and ready for your reception nine years from now. (Laughter.)

Gentlemen of the Kentucky State Medical Association, the Warren County Medical Society says to you thrice welcome to Bowling Green. (Applause.)

PRESIDENT GARDNER: In the absence of Dr. Griffith of Owensboro, who was scheduled to deliver the response, I will call on another distinguished Western Kentuckian, Dr. T. Atchison Frazer, of Marion, Kentucky. (Applause.)

RESPONSE TO ADDRESS OF WELCOME

T. ATCHISON FRAZER, Marion: I feel like old Daddy Woolley felt one time when he got up to address a sportsmen's convention. He said they called on him and he didn't have any preparation and he didn't know anything about it, and he said he didn't know whether he was suffering from stage-fright or writer's cramp or bellyache. That is very much the way I feel this morning. Some good lady—I don't know who she was, I guess she was my friend—came around and whispered to me a minute ago that they were going to ask me to respond to the address of welcome. I don't know who she was, but I am sure she did it in good faith and I am sure I know who put her up to do the job. Without a moment's warning they called me to respond to such an address as Dr. Blackburn has delivered. I have always thought an im-

promptu speaker was a freak of nature, and I still believe it. Dr. Blackburn has had years to prepare this address; he has worked diligently, he has burned the midnight electricity to prepare himself to give you this wonderful address of welcome, and then they call on me from a little town in Western Kentucky where we haven't anything to brag about except fluorspar and silicosis, to respond to an address of welcome like that! I think it is a downright insult to you and to me too.

I appreciate what Dr. Blackburn said. Bowling Green is very near to my heart. I have been coming to Bowling Green many, many years. Some of the warmest friends I have ever had in my life have been men who have worked on this hill. Many of the faculty here are warm personal friends of mine. Dr. Cherry and I some twenty-five years ago sat out on the old porch and Dr. Cherry told me his plans for the Western State Teachers' College. He told me where each building was going to be placed, and it was his ambition to live to see Western Teachers' College one of the greatest schools in the State of Kentucky. He didn't live to see his dream all come true, but he saw most of it and he saw the plans for all of it.

We know that we are welcome in Bowling Green. We know that Bowling Green has one of the finest medical professions in the State of Kentucky. I look back on the days many, many years ago when I spent a week in the home of Dr. J. N. McCormack. I was Orator in Medicine that year, 1913 or '14, more than a quarter of a century ago. My subject was "The Conservation of Our Greatest Natural Resource." I took a line of prophecy and I predicted some of the things that would happen in Kentucky along the lines of public health. I predicted the day would come when a physical examination would be required before you could obtain a license to marry; I predicted a day would come when the syphilitic couldn't lead one of our fair daughters to the Hymenal altar and make of her his legal wife; I predicted that it would be a disgrace for the minister who in all his dignity and solemnity pronounces man and woman man and wife and says, "Whom God hath joined together let no man put asunder," to stand before a man suffering from syphilis and unite him as husband to a good, pure, Christian

woman and then say that God had anything to do with such a union.

Most of the things I prophesied have come true.

We are going to enjoy ourselves in Bowling Green, we are going to have a good time, we are going to have nice rooms, we are going to have good entertainment, we are going to have splendid food, and we are going to enjoy the hospitality of the doctors of Bowling Green.

As I said a while ago, I have many warm friends in Bowling Green, many that I hope to see outside the medical profession. I want to say to you, Dr. Blackburn, that the people of the State Medical Association appreciate your kind welcome and we are going to take advantage of all the good things that you have told us about. (Applause.)

PRESIDENT GARDNER: Ladies and Guests and Members of the Kentucky State Medical Association: I had the privilege of sneaking to you yesterday at the House of Delegates, so I will not detain you but a moment. In a few moments I will relinquish my authority to my successor. Anything that I might say in regard to Dr. Scott would be inadequate, especially in view of the beautiful biographical sketch by the Editor, Dr. McCormack, which you have read, published in the August issue of the KENTUCKY MEDICAL JOURNAL. Dr. Scott's confreres in Lexington and that section of the state are justified in taking pride in his accomplishments, and so do we all in Kentucky. He has a rich medical heritage. He is an outstanding internist in his own right. He has taken an active interest in the affairs of this Association for many a year, not only in its scientific discussions but also in its House of Delegates. Dr. Scott not only possesses high intellectual attainments, but he possesses those qualities of honesty and decency which are such important elements in a good type of personality.

The Kentucky State Medical Association is fortunate in having as its presiding officer for the coming year, Dr. John W. Scott, of Lexington, and it is my pleasure now to present to him and to relinquish the gavel. (Applause.)

John W. Scott, Lexington, took the chair.

PRESIDENT SCOTT: Mr. President, I thank you.

Members of the Kentucky State Med-

ical Association: It is with mingled feelings of inspiration and despair that I succeed Dr. Gardner as President of this Association. I have been his understudy for the past year and I despair of being able to equal his record. He has presided over the meetings of this Association with dignity and efficiency. He prepared you a splendid program last year. His accomplishments in the field of medicine throughout as they affect the public, particularly as regards the welfare institutions of the state, have marked a notable advance in the situation in Kentucky. In fact, we are now in a position with respect to our institutions that we have never occupied, I think have hardly ever approached. It is with peculiar satisfaction that I follow such a man as this, in spite of the despair I feel at attempting to equal his record.

With regard to my own aspirations, they are the highest. I would serve you, I would do something for you, and you will have my best effort."

This Association could well be compared to a bank. It has less money than most banks, but at least it knows what money it has, which some banks don't. The membership of the Association are the stockholders of the bank, represented by the Delegates in the House of Delegates; they have a board of directors in the Council of the Association; they have in turn a highly competent executive. That executive has run the bank since time runneth not to the contrary, beyond the medical recollection of a good many of you members of the House. He is so competent that like the competent executive in such banks, he runs the bank. The board of directors I think probably has about as much to do with conducting the affairs of the bank as most boards of directors of banks. This board of directors is composed of the very flower of our membership. They do the most splendid, self-sacrificing and effective work in their respective districts. I know the Councilor in my district spends his time and his money on this job. In fact, I have known him to spend \$5 or \$10 worth of gas and rubber to go and collect a \$5 membership fee for the Association; he could much better have paid it out of his own pocket, to say nothing of the loss of time involved. We have such men as that to compose this Council. But when they sit as Councilors, as members of this

board of directors, their initiative is not great. I think they are a good deal like I was in some respects when I was married. When I entered into that relation I put initiative behind me. I am bound to have initiative in my office, I wouldn't get to first base or be able to make a living if I had as little initiative at the office as I have at home. The members of the Council have splendid initiative out in their districts, but when they meet together I think our highly competent executive runs the show.

Now I think this is not exactly as it should be. I believe these stockholders should have more to do with determining the policies of this Association than they actually have. I don't know how it ought to be gone about. There have been various destructive efforts made in my recollection; everyone of them has been destructive and not a single one constructive. They have all had as their objective, pulling the house down over our ears. I have fought every single one of them. Our Secretary knows that since I have grown to manhood and have had a more or less active part in this House of Delegates (of course he was Secretary when I was a child) he has never been in trouble that he has not counted on me and that I have not given him everything I had. I think he had better retire while I say this, but I have a sincere affection born of forty years or more of association with him; we were classmates in medical school. Any action of this Association which affected him with which I had anything to do would be done with great consideration, with high appreciation of the splendid things he has done for this Association and still is doing for it. I feel, however, that the stockholders should have more to do with the policy of the Association. If the stockholders want to appoint a stockholders' committee to look over the thing, I am at your service.

I hope I have not been too long. I just wanted to speak to you about my attitude of mind toward your problems, and I will now proceed to the business of the meeting. Thank you. (Applause.)

The next order of business is the report of the Committee on Arrangements, Dr. Eldon W. Stone, Bowling Green.

ELDON W. STONE, Bowling Green: Mr. President and Members of the Kentucky State Medical Association and of the

Auxiliary: It is a pleasure for us to have you all back in Bowling Green again. With the aid of our different committees I think we have worked out a pretty good program to entertain you while you are visiting us. We have a burgoon this afternoon from five to seven at the Armory. We also have a golf tournament which will be played off today, and those wishing to indulge in the golf tournament will turn in their names and addresses and their handicaps to the pro, and also their scores. We also have, tomorrow evening, a subscription dinner at West Hall at 6:30, and I believe there is a tea this afternoon from three to five for the ladies of the Auxiliary.

Again I say we welcome you to Bowling Green. (Applause.)

PRESIDENT SCOTT: I want to express to you my appreciation of the work of the committee connected with the scientific program, in the first place to the Chairman of the Committee on Scientific Exhibits. These I think have reached a state which has not been approached at previous meetings of the Association. There is also an excellent account of them in the program which will serve as a directory and will enable you to get what information you wish. We of course want the membership here when men are reading papers. At the same time, we realize, at least I feel, that that is just as important as anything you will hear in this auditorium, and I bespeak for those exhibits the closest scrutiny and the most careful study, which will certainly repay you.

I want to express, also, my appreciation of the work of Dr. Turner in his collection of the commercial exhibits. These are all splendid and are contributing, as you know, entirely to take care of the expense of our meeting. They more than do that. Actually we are making money out of this meeting, we ought to have two or three a year.

Finally I want to express my appreciation to Dr. C. N. Kavanaugh, who is responsible for this program. His work has been untiring and it will speak for itself.

One thing as to the procedure here. We have certain rules which are made by the House of Delegates. This gathering is not a deliberative body. The papers will be limited to the time allotted. When the twenty minutes are up, with the exception of our guests, they will be termi-

nated at once. Discussions will be limited also closely to the time provided, five minutes for those who open discussions, three minutes for other discussions.

You have heard, of course, of my prejudice against these little essays that we sometimes hear in discussion of papers. I hope I have not been too emphatic; I certainly hope I have not been disagreeable on the subject. It is not the idea of any of us that one who is unaccustomed to speaking should hesitate for a moment to reduce what he has to say to writing and to come up here and read it, but we do ask those who speak fluently and some of our professors to talk to us and not to read to us.

The following papers were presented: "Treatment of Varicose Veins and Ulcers of the Lower Extremity," by D. G. Miller, Jr., Morgantown; discussed by J. Ferra Van Meter, Lexington, and R. O. Joblin, Louisville. "Auto-Transfusion. A Life-Saving Procedure, with Case Reports," by B. J. Baute, Lebanon; discussed by Archibald M. McKeithen, Louisville; Irvin Abell, Louisville; closing discussion by B. J. Baute, Lebanon. "Diagnosis and Management of Occipitoposterior Positions," by Winn Hord, Maysville; discussed by Leon Higdon, Paducah; T. Atchison Frazer, Marion; closing discussion by Winn Hord, Maysville. "Acute Laryngotracheobronchitis in Children," by Harry S. Andrews, Louisville; discussed by W. R. Thompson, Lexington; M. G. Buckles, Louisville; Philip Barbour, Louisville; S. B. Marks, Lexington; Frank H. Threlkel, Beaver Dam; W. W. Nicholson, Louisville; closing discussion by Harry S. Andrews, Louisville.

The Oration in Surgery, "Principles of the Treatment of Fractures," was delivered by R. Arnold Griswold, Louisville.

The meeting recessed at 12:30 P.M.

SCIENTIFIC SESSION.

Tuesday Afternoon, September 12

The meeting was called to order at 2:15 P.M. by President Scott.

The following papers were presented: "Pituitary Adenoma and X-Ray Therapy of the Disease," by Hoy Newman, Bowling Green; discussed by R. Glen Spurling, Louisville; closing discussion by Hoy Newman, Bowling Green. "Sulfapyridine: Its Indications, Pharmacology, Untoward Effects and Methods of Administration,"

by J. Murray Kinsman, Louisville; discussed by R. Hays Davis, Louisville; W. L. Tyler, Owensboro; J. L. Anderson, Manchester; Virgil E. Simpson, Louisville; L. H. South, Louisville; closing discussion by J. Murray Kinsman, Louisville. "Blood Dyscrasias Associated with Angina," by Murray L. Rich, Covington, and Luther Bach, Newport; discussed by Ernest B. Bradley, Lexington, and R. Hays Davis, Louisville; closing discussion by Luther Bach, Newport. "Treatment of Artificial Menopause," by Roger Irving Lee, Boston, Mass.; discussed by W. O. Johnson, Louisville; Irvin Abell, Louisville; closing discussion by Roger Irving Lee, Boston.

The meeting recessed at 4:30 P.M.

SCIENTIFIC SESSION.

Tuesday Evening, September 12

The meeting was called to order at 8:15 P.M. by the President, John W. Scott, Lexington.

Dr. Scott presented Irvin Abell, Louisville, who introduced the speaker, Roger Irving Lee, Boston, Mass. Dr. Lee's subject was "Medical Prophecy." At the conclusion of Dr. Lee's address, a motion was made by Arthur T. McCormack, Louisville, regularly seconded and unanimously carried, that Roger Irving Lee be proposed to the House of Delegates for honorary membership in the Kentucky State Medical Association.

At 8:55 P.M. the meeting adjourned.

SCIENTIFIC SESSION.

Wednesday Morning, September 13

The meeting was called to order at 9:10 A.M. by President Scott.

The following papers were read: "Management of Pneumonia in Small Urban Communities," by W. H. Parks, Harlan; discussed by Samuel H. Rickman, Paris; C. L. Sherman, Millwood; A. T. McCormack, Louisville; John W. Scott, Lexington; L. H. South, Louisville; closing discussion by W. H. Parks, Harlan. "Hemorrhoids, Local and Systemic Consideration," by Rufus C. Alley, Lexington; discussed by William J. Martin, Jr., Louisville; Granville Hanes, Louisville; closing discussion by Rufus C. Alley, Lexington. "The Psychiatrist's Responsibility to Society and the So-Called Criminal Insane," by Thomas J. Crice, Louisville; discussed by George P. Sprague, Lexington, W. E. Gardner, Louisville; J. G. Wilson, Frankfort; John J. Moren,

Louisville; closing discussion by Thomas J. Crice, Louisville. "Intrapleural Pneumolysis," by Allen E. Grimes, Lexington; discussed by Oscar O. Miller, Louisville; Louis Hamman, Baltimore, Md.; L. W. Nehil, Louisville; Mischa Casper, Louisville; Paul Turner, Louisville; closing discussion by Allen E. Grimes, Lexington.

The Oration in Medicine. "Infections as the Etiological Factor in Heart Disease," was delivered by E. B. Willingham, Paducah.

The meeting recessed at 1:00 P.M.

SCIENTIFIC SESSION.

Wednesday Afternoon, September 13

The meeting reconvened at 2:20 P.M., President Scott presiding.

The following papers were read: "Cancer of the Larvnx as a Medical Problem," by J. S. Bumgardner, Louisville; discussed by Alex M. Forrester, Louisville, and Oscar O. Miller, Louisville. "Cholangiography" by Malcom Thompson and Joseph C. Bell, Louisville; discussed by Hart Hagan, Louisville; Irvin Abell, Louisville; closing discussion by Joseph C. Bell, Louisville. "The Consideration of Lesions in the Upper Urinary Tract, Simulating Gastro-Intestinal Disorders," by Lytle Atherton, Louisville; discussed by N. Lewis Bosworth, Lexington, and Burnett Wright, Nashville, Tenn.; closing discussion by Lytle Atherton, Louisville.

Clinico-Pathological Conference, by Louis Hamman, Baltimore, Md.

The meeting recessed at 4:45 P.M.

ANNUAL SUBSCRIPTION DINNER

Wednesday Evening, September 13

Vice-President J. Duffy Hancock, Louisville, opened the meeting and presented the President, John W. Scott, Lexington, who delivered the President's address, "That the Profession Shall Be More Capable and Honorable Within Itself."

An address on "Problems in Hematological Diagnosis" was presented by Louis Hamman, Baltimore, Maryland, following which the meeting adjourned at 9:55 P.M.

SCIENTIFIC SESSION.

Thursday Morning, September 14

The meeting convened at 9:30 A.M., President Scott presiding.

The following papers were read: "Relations of Ocular Conditions to General Practice," by David L. Salmon, Mad-

isonville; discussed by Austin Bell, Hopkinsville, and C. K. Beck, Louisville; closing discussion by David L. Salmon, Madisonville. "Diagnosis and Treatment of Certain Types of Anemia," by R. E. Hayes, Glasgow; discussed by C. C. Turner, Glasgow; closing discussion by R. E. Hayes. "The Patient a Personality, Not a Machine," by J. H. Blackburn, Bowling Green; discussed by W. E. Gardner, Louisville; George P. Sprague, Lexington; S. B. Marks, Lexington; and W. O. Johnson, Louisville; closing discussion by J. H. Blackburn, Bowling Green. "Modern Therapy of Common Blood Stream Infections," by Harper E. Richey, Louisville; discussed by Morris Flexner, Louisville, and Charles M. Edelen, Louisville.

The President called upon Louis Frank, Louisville, to introduce the guest speaker, Donald Guthrie, Sayre, Pa., who delivered an address on "Cancer of the Breast: A Description of the Rodman Operation;" discussed by J. Duffy Hancock, Louisville; D. Y. Keith, Louisville; Louis Frank, Louisville; closing discussion by Donald Guthrie, Sayre, Pa.

The President made an explanation of an improper ballot cast in the House of Delegates in the election of Delegate to the American Medical Association. The ballot was cast by an alternate who had received oral instructions from his county delegates but had failed to present his credentials and answer the roll. The result of the vote was not affected.

The meeting recessed at 2:40 P.M.

SCIENTIFIC SESSION.

Thursday Afternoon, September 14

The meeting was called to order at 2:00 P.M. by President Scott.

A paper on "Swine Erysipelas in Man" was read by David L. Jones, Fulton; discussed by Arthur T. McCormack, Louisville; closing discussion by David L. Jones.

In a symposium on Allergy, the following presentations were made: "Newer Concepts of Allergy," by Milton Cohen, Cleveland, Ohio; "Diagnosis of Allergic Conditions," by Frank Simon, Louisville; "Treatment of the More Common Allergic Diseases," by Armand E. Cohen, Louisville; "Allergic Skin Diseases," by Adolph B. Loveman, Louisville; "The Management of the Allergic Child," by Irving Rosenbaum, Louisville.

These papers were discussed by Robert B. Warfield, Lexington; Edna S. Pennington, Nashville, Tenn.; J. A. Orr, Pa-

ris; Milton Cohen, Cleveland, Ohio; Armand Cohen, Louisville; Adolph B. Loveman, Louisville; and Irving Rosenbaum, Louisville.

Expressions of thanks to the hosts, which had been adopted in the House of Delegates, were repeated to the general session, and at 4:35 P.M. the meeting adjourned.

A. T. McCORMACK, *Secretary*.

MINUTES OF THE EIGHTY-NINTH ANNUAL SESSION OF THE HOUSE OF DELEGATES OF THE KENTUCKY STATE MEDICAL ASSOCIATION HELD AT BOWLING GREEN, SEPTEMBER 11, 12, 13, AND 14, 1939

Monday Afternoon, September 11, 1939

The first session of the House of Delegates of the Kentucky State Medical Association convened at 2:00 P.M. in the auditorium of the Library Building, Western Kentucky State Teachers' College, the President, W. E. Gardner, Louisville, presiding.

PRESIDENT GARDNER: The House of Delegates of the Eighty-Ninth Annual Session of the Kentucky Medical Association will now be in order.

The first item on the agenda is the report of the Committee on Credentials, Dr. H. H. Hagan, Louisville, Chairman.

SECRETARY McCORMACK: Mr. President, I have here the report of the committee, consisting of the list of Delegates who have been duly elected and whose credentials are on file in the office of the Secretary, having been presented to the Committee. I move you that this roll call be the roll call of the House of Delegates for this session.

The motion was seconded by W. B. Atkinson, Campbellsville, and carried.

PRESIDENT GARDNER: Next is the call of the roll by the Secretary.

The Secretary called the roll.

PRESIDENT GARDNER: The Secretary reports a quorum is present. We will proceed with the program.

The next item is the report on Scientific Work by Dr. John W. Scott, President-Elect and Chairman of the Committee.

JOHN W. SCOTT, Lexington: The program is published, Mr. President. I take it that is the report of the Committee on Scientific Work. It may not be out of

place to refer to the fact that the Secretary, more or less with my connivance, has asked those who discuss papers to do it orally, if possible, and I am a little apologetic about that because I do not want to interfere with the freedom of anybody in saying that what he pleases in any way he pleases.

PRESIDENT GARDNER: Thank you, Dr. Scott. At this time, I would like to extend the privilege of the floor to Dr. Scott, who is President-Elect. "The House of Delegates technically shall be the legislative business body for the Association, to consist, first, of Delegates elected by the component county societies; second, ex-officio the officers of the Association as defined in Article VIII, Section 1 of this Constitution, and the five immediate past-presidents." The officers of the Association do not include the President-Elect, but I am extending to him the privilege of the floor in discussion on any subject which may come before the House. The chairmen of other committees who are not Delegates will please confine their discussions to the reports of their respective committees as much as possible. The minutes of the last session.

W. B. ATKINSON, Campbellsville: I move the reading be dispensed with. The motion was seconded and carried.

PRESIDENT'S REPORT

PRESIDENT GARDNER: In order to save time, gentlemen, I have reduced this to writing and I will try to read it as rapidly as possible.

If time permitted a comprehensive report of my stewardship during the year that I have had the privilege of being your presiding officer, much of it would be a forecast of data which will come to you in the reports of various important standing committees of the Association. Previous to these you will hear the report of the Council, which is the authorized representative group of the House of Delegates, between its annual sessions, and is in fact the executive committee of your body. While I had the happy responsibility of selecting the personnel of the various committees, I cannot anticipate all they will report, but trust that I may approve the major portion of their activities. It has been my policy, as you will observe, to make many reappointments to most of the standing committees,

believing previous experience to be an important qualification, especially in these times when we are threatened by the imminence of new and perhaps difficult social and professional readjustments. I am indebted to other officers of the Association and to all committees for the loyal support and hearty cooperation which they have given me; also to various attaches of the central office for their courtesy and technical assistance.

Within the past few months I have been gratified by the splendid showing made by prominent representatives of the American Medical Association in their testimony before the Committee on Education and Labor of the U. S. Senate in opposition to S. 1620, known as the Wagner Health Bill. This bill was introduced in the Senate with the approval of President Roosevelt by Senator Robert F. Wagner, of New York, the early part of this year, to put into effect the recommendations of the National Health Conference of last year. As the result of such testimony, and that from other sources, the bill was not recommended by the committee for passage this year and will probably be modified in many respects. In a published preliminary report of the committee, however, with which many of you are familiar, it is obvious that Senator Wagner and certain members of the Senate Committee will insist on the enactment of some form of National Health Program at the next session of Congress. In other words, such a bill is part of the "must legislation" of the present national administration, and while still further unfavorable reaction toward the whole program may be anticipated, in spite of modifications which have been or will be made, some sort of bill will probably be submitted to a vote of the Senate and House of Representatives. Some have thought it wise, therefore, that various state medical associations be prepared with a plan for any outcome that may ensue, in the event that the organized medical profession desires to have a voice in the distribution of large amounts of money, which might be appropriated for public health, maternity and child welfare and the care of the medically indigent, including the expansion of hospital facilities, for such purposes, if and when such need can be adequately demonstrated to a responsible governing body.

During the latter part of July of this year, all of us were given new courage by the decision of a Federal District Judge in Washington, D. C., who sustained a demurrer to the indictment which had been obtained against prominent officials of the American Medical Association, the Medical Society of the District of Columbia, and the Harris County Medical Society of Houston, Texas. Those of you who have not read the opinion as published in *The Journal of the American Medical Association* under date of August 5th will find it to be of particular interest, and will be reassured by the fact that an unbiased Federal Judge still believes that the practice of medicine is a dignified profession and not a trade as was alleged in the indictment which was obtained by an ambitious Assistant Attorney General.

While I have been stimulated by various activities of our State Association throughout the past year, many of you doubtless know that a good portion of my interest and attention has been absorbed by the Advisory Committee to the Director of the Division of Hospitals and Mental Hygiene of the State Department of Welfare, which committee was created by the House of Delegates last year, and I was designated its Chairman with authority to appoint other members. With advice of the Council of the Association, before the adjournment of its annual meeting, I appointed the following associates, all of whom most graciously accepted and have rendered invaluable assistance: Drs. Irvin Abell, Austin Bell, Ernest Bradley, C. C. Howard, A. C. McCarty, and A. T. McCormack.

In November, 1938, following the creation of the committee in October, all of its members promptly responded to my call to meet with Dr. J. G. Wilson, Director of Hospitals and Mental Hygiene, who was at that time becoming discouraged regarding certain phases of his work, due to the inability of the then Commissioner of Welfare to get the unqualified support of important officials at Frankfort. A conference of our committee with Governor Chandler the following day resulted in assurances that sources of conflict at Frankfort would be corrected as soon as possible, and within a week a new Commissioner of Welfare, Miss Margaret Woll, was appointed. In a very short time, there was noted an improved morale in the Division of Hospitals and Mental Hygiene, and Dr. Wilson was again happy and enthusiastic in

which mood he has continued up to the present time.

It will be impossible, in my brief reference to improvements which have occurred within the past year in our state hospitals and the institutions for the care of feeble-minded children, to begin to do justice to the subject. However, in a relatively recent communication from Dr. Wilson which I had requested, he wrote me as follows:

"As you know, this program contemplated not only the reorganization of the various institutions specified in the Act, but also certain changes in commitment laws, supervision of the administration of the so-called Pauper Idiot Act, certain psychiatric services to be rendered to the courts in cases of habitual criminals who are brought up for trial on new charges, the utilization of existing facilities for extension of the mental hygiene program, and the creation of others as opportunity presents. It was felt that the institutions were the places where the start should be made, and our effort during the past year have been almost entirely concentrated upon them."

After discussing other activities related to the contemplated program, in some of which considerable progress has already been made, he wrote as follows: "We have not, thus far, undertaken the establishment of extra-mural clinics. It is our intention to start such clinics just as soon as possible. This, of course, will require the active cooperation of the Commissioner of Health, because such clinics, in my opinion, cannot be carried out advantageously without this cooperation. The mental health of the community is a general health program, and for us to attempt to establish clinics without the cooperation of the county health officers, the county nurses, and such welfare workers as they have, would be futile. I believe that Dr. McCormack is in favor of this plan, and that eventually we will be able to work out something together which will be best for all concerned." He then continued: "A part of our activities, not directly concerned with the institutions themselves, has consisted in an endeavor to build up public opinion to support the entire program. We have endeavored to do this in two ways. First, but to my mind the least important method, has been public addresses made to various bodies, especially organized groups of women who are interested in

the project; and, second, by personal interviews with socially minded persons of influence in the community. In this connection our contact with the press of the State of Kentucky has been, on the whole, very satisfactory. The *Courier-Journal* has been especially helpful, not only by the series of feature articles which it has run from time to time, but also by its editorial policy. The *Lexington papers* have also helped the program. The support of the rural press has been, on the whole, very satisfactory. As a result of the educational work, mentioned above, and the reorganization of the hospitals, the wall of isolation heretofore existing between the hospitals and the communities in which they are located has been completely broken down. I believe that it is no exaggeration to say that the communities now take an active interest in their institutions, whereas before, this interest was almost solely confined to what they could get out of the institution in a material way, meaning by this how many jobs they could find for their citizens, rather than what they might do for the patients themselves." He continued as follows:

Our program for the reorganization of the hospitals was conducted with the following objectives in view:

1. Substitution of inefficient professional personnel by those who are qualified for the work.

2. Increase of professional personnel to the point where it was possible to decidedly improve the standards of treatment and custody.

3. Elimination of attendants who were obviously unfit for the positions they held.

4. Better classification and diagnosis of the patients, with the introduction of standard methods of procedure in holding staff conferences.

5. Establishing receiving wards, devoted exclusively to the purpose for which they were intended.

6. Complete reorganization of the infirmaries, so that they might be utilized for the care of the acutely ill, instead of places of housing inmates who had especially strong family or political connections.

7. Segregation of the tuberculosis patients.

8. Introduction of new methods of treatment, and reorganization and standardization of neglected or poorly administered existing forms of treatment.

9. Improvement of the nursing service.

10. Improvement of preparation and service of food.

11. Changes in the technic of receiving and treating visitors.

12. Establishment of social service case work.

13. Buying new equipment.

14. Stimulation of scientific interest in the professional and attendant staffs.

15. Improvement in housekeeping.

16. Fire protection.

In a detailed discussion by Dr. Wilson, under the headings that have just been indicated, of improvements which have been made in the state hospitals and the institution for the care of feeble-minded children, it is noteworthy that much progress has already been made in all respects within the short space of fourteen months since the state hospital act, or so-called Chandler-Wallis Act, became operative. Time will not permit even brief reference to all this, but our committee has been favorably impressed by outstanding improvements and additions to the physical equipment and other facilities for better diagnosis and treatment of patients in all of these institutions. We have been particularly encouraged by the enlargement and improvement in the professional personnel, both physicians and nurses, to the point that the per capita of both in relation to number of patients is probably higher now than at any time within the past thirty years. (We have not disregarded occasional references to the proportion of physicians in 1923, during the administration of Governor Morrow, at which time a number of undergraduate medical students were employed, in addition to the regular medical staff, and were listed as assistant physicians.) The relatively recent appointment of trained psychiatrists as Clinical Directors, at all of the state hospitals is an advanced step which has stimulated the scientific interest of other members of the medical staff and will enhance the value of their service to patients.

Dr. Wilson has from time to time, conferred with members of our committee, either individually or collectively, regarding the appointment of Superintendents and Clinical Directors, and while it has been our policy to defer to his judgment regarding the technical qualifications and suitability of such applicants, he has very graciously asked for our approval in numerous instances. In our professional associations with Dr. Wilson in his official capacity, our impression has been strengthened that he was and still is the

best qualified person available for the position which he now occupies. He has had the hearty cooperation and support of Commissioner Woll, as well as that of other important officials at Frankfort, especially from those whose activities are related in whole or in part to the Department of Welfare.

The members of our committee, as representatives of the Kentucky State Medical Association, believe that we would be paying scant tribute to those who were influential in the passage of the state hospital act if we did not acknowledge that it could not have been enacted by the last special session of the General Assembly without the capable and enthusiastic leadership of Governor Albert B. Chandler. He was heartily supported in that leadership by Lieutenant Governor Keen Johnson, the latter of whom has already pledged his support to a continuation of the letter and spirit of the act. With such a pledge from him, as the nominee of one of our prominent political parties, and a statement from Judge King Swope, the nominee of the other party, that the administration of our eleemosynary institutions shall be eliminated from partisan political control, we feel justified in the belief that there will be a continuation of the splendid progress which has already been made. We are sure that all thoughtful citizens of Kentucky are sufficiently interested in the program which has been projected that they will not allow it to be overshadowed by other activities of our state government, and that within a very few years our state hospitals shall be nationally recognized as having met the essential requirements of modern institutions for the care and treatment of mental diseases and mental deficiency.

Respectfully submitted,

(Signed) W. E. GARDNER, *President and Chairman of the Advisory Committee to the Director of the Division of Hospitals and Mental Hygiene.*

This was written two weeks ago, before the rapid development of the war situation in Europe, and of course none of us can anticipate how much that may affect our social legislation in Washington.

I am submitting this report not only as President of the State Association, but particularly as Chairman of the Advisory

Committee to Dr. Wilson. Thank you. (Applause.)

Gentlemen, I don't know that any approval of this is necessary. I would entertain a motion that it be received and filed.

ERNEST BRADLEY, Lexington: I make such a motion. The motion was seconded.

SECRETARY MCCORMACK: You ought to approve it.

ERNEST BRADLEY: I was on the committee. I guess I ought not move to approve it.

PRESIDENT GARDNER: I said filed. but I see no objection to approving it.

ERNEST BRADLEY: I see no objection to your moving that it be approved and I will second the motion.

SECRETARY MCCORMACK: The President can't make a motion.

ERNEST BRADLEY: I will move it be approved.

The motion was seconded. Dr. McCormack, the Secretary, took the chair and put the motion, which was carried unanimously.

PRESIDENT GARDNER: Acting in a double capacity, as you understand, I took up a little more time than I anticipated because I would have expected to make a separate report of that committee. Next is the report of the Council.

REPORT OF THE COUNCIL

C. A. VANCE, Lexington: This report of the Council was passed at a meeting that we held three weeks ago at Mammoth Cave.

In accordance with the custom, we have published the report of the accounts of the Secretary and Treasurer in the Annual Number of the JOURNAL. We have continued to publish this report in detail because every member of the Association, and particularly every member of the House of Delegates, is entitled to know about the affairs of the Association.

The total income of the JOURNAL this year was \$7,030.53 as contrasted to \$7,042.99 last year. The cost of the JOURNAL was \$7,634.29 this year as compared with \$7,554.37 last year. In spite of the universal depression, our advertising income has held up well and we are encouraged in the hope that we will have a still more favorable report next year. The advertising income of the JOURNAL is due entirely to the good judgment and

loyalty of the members in giving preference, other things being equal, to the announcements appearing on its advertising pages. Most of our members read the JOURNAL. Its scientific value is apparent, and these two things make it of real value to advertisers whose announcements we admit to its advertising pages.

The Council is very grateful to the American Medical Association, and especially to its Medical Advertising Bureau, for its continued successful campaign for national advertising. We desire especially to express our appreciation for this to Messrs. Braun and Sandberg of the parent organization for their consistent and continued advice to and interest in the JOURNAL.

The increasing interest in the work of the county societies under this Association is indicated not only by more regular meetings of county and district societies, but by the general increase in membership. This year, we have 1,765 members enrolled at the time of writing this report, as against 1,731 last year. It is probable that the membership will run over 1,800 by the time this report is submitted.

You will note from the report that we have paid \$50,552.04 on the purchase price of the J. N. McCormack Memorial Health Building which houses the offices of this Association and the State Department of Health, leaving a balance of \$99,447.96. Interest has been paid to July 1, 1939. This transaction has not involved any expenditure of money on the part of this Association. We are the agent through which the state is paying for the purchase of the property, but the Council feels that it is of importance that both the profession and the people know the steps taken in this transaction.

We desire to call your special attention to the McDowell Memorial Fund. The total amount received from the custodians and donors is \$13,970.88. The total cost of the purchase and dedication of the Ephraim McDowell-Jane Todd Crawford Home was \$11,129.24. This year, in accordance with your instructions, we purchased the Doctor's Shop adjoining the McDowell Home, and have also deeded it to the Commonwealth of Kentucky. The cost of the Doctor's Shop was \$3,500.00, of which \$747.08 was advanced from the reserve fund, and it is hoped that this amount may soon be repaid by the election

of additional custodians. The entire dedication proceedings will be published in a special supplement of the JOURNAL at an early date. We are happy to report that the McDowell Home is now open and is receiving a very large number of interested visitors.

The report of the Committee on the Study and Provision of Medical Care, which you adopted last year, made it evident that the greater part of the burden of medical care for the poor in the majority of our counties, in fact in most of the more fortunate ones, has been carried almost entirely by the medical profession. It is evident that this burden is becoming too great for the profession to carry alone and that it must be shared in this respect with the public. This has been done for years in the larger cities and to a less extent in the wealthier counties, but if our people are to receive the benefits of modern science, arrangements must be made for additional facilities so that the decreasing personnel of the profession can give good medical care to all of our people. Both the American Medical Association and this Association have approved broad plans for the indigent and the medically indigent. Whether there shall be any federal legislation making any part of the National Health Program effective or not, the responsibility of the medical profession in Kentucky for a good medical service program must be recognized. Having these thoughts in mind, Drs. Irvin Abell, Chairman of the Committee on Public Relations, A. C. McCarty, Chairman of the Committee on Medical Economics, and E. L. Henderson, Chairman of the Committee on the Study and Provision of Medical Care, recommended to the Council that it request the State Department of Health to create a Bureau of Medical Service. The State Board of Health acted upon this request on January 7, 1939, and adopted the following resolutions:

"Now therefore be it resolved, That the State Board of Health of Kentucky hereby authorizes the Bureau of Medical Service in the Division of Local Health, whose duties shall be to assist the legally qualified and registered medical profession of Kentucky in providing complete service for the indigent and the medically indigent residents of the commonwealth. The Council of the Kentucky State Medical Association shall advise and cooperate

with the Board in the formulation of plans and rules and regulations for making the work of this Bureau effective for the protection of the health and lives of the residents of the State, and shall assist the registered profession in every county in the State in the formulation of the plans for the purposes herein provided, provided that all plans formulated for any county shall provide for absolute freedom of choice of the legally qualified physician who shall serve them from all those qualified to practice who are willing to give service, and provided, further, that there shall be no restriction on prescription or treatment, except such as are necessary for the protection of public health, and provided further, that any expenditures made for the expansion of public health and maternal and child health services should not include the treatment of disease except so far as this cannot be successfully accomplished through the legally registered practitioner and provided further that a person is medically indigent when he is unable, in the place where he resides, through his own resources, to provide himself and his dependents with proper medical, dental, nursing, hospital, pharmaceutical and therapeutic appliances and care without depriving himself or his dependents of necessary food, clothing, shelter and similar necessities of life, as determined by the local authority charged with the duty of dispensing relief for the medically indigent."

This resolution was approved by the Governor. The Council thereupon nominated John B. Floyd as Director of the new Bureau, proposing his name in the following statement:

"Dr. Floyd is a cultured, splendidly qualified physician and has had a noteworthy experience as Superintendent of the Waverly Hills Sanitarium, had two years' experience in the practice of medicine at Kyrock in one of the poorer counties of the state, and was a successful general practitioner of medicine in Richmond for a number of years, during which time he was on the staff of the Pattie A. Clay Hospital and a member of its Board. At great personal sacrifice to himself, he went to the Legislature for two terms, where he learned methods of contact with and operation of public agencies. For the last two years, he has been Director of the Bureau of Tuberculosis

of the State Department of Health, and in this capacity has shown a fine spirit of cooperation with the physicians of the State. The independence of his course in the Legislature shows him to be politic rather than political. We feel that Dr. Floyd has every qualification which will insure the confidence of members of the Association and of the people of the State."

Because of lack of funds, Dr. Floyd is continuing in his position as Director of the Bureau of Tuberculosis and is incidentally, studying the local professional and economic situation in the several counties in which he has been functioning in connection with county societies.

C. C. Howard, Glasgow, was appointed as Chairman of the Committee on Medical Economics to succeed A. C. McCarty, who resigned after several years of particularly fine, constructive service. Dr. Howard will present the report of his committee at this session. We have had the privilege of hearing this report read and have requested the State Department of Health to publish it in the Bulletin so that it will be available to the entire profession of the state. Its factual evidence makes it plain that the profession and the people of Kentucky are confronted with tremendous economic difficulties in planning for a future medical service. Our people and our officials and the General Assembly have repeatedly expressed their confidence in us, and we feel that it is of very great importance that the Committee on Medical Economics continue its researches with a view to determining the best plan for good medical service for our people in the future.

The Committee on Medical Economics appeared before the Council and presented its report through its Chairman, Dr. C. C. Howard. After full discussion, the report was approved unanimously and it was recommended that it be adopted by the House of Delegates.

The Committee on the Auxiliary reports continued progress and increasing interest. It is a matter of very serious regret to the Council that many of even our best county societies have not yet organized auxiliaries. The Council recommends to the Auxiliary that publication of the Quarterly Supplement to the Journal be continued, and requests the House of Delegates to approve this recommendation. It also recommends that the appropriation of \$500 for the contin-

gent fund for the benefit of the Quarterly be continued. It is rather difficult to understand how any member of this Association who has contemplated the work of the Auxiliary since its organization at Crab Orchard Springs in September, 1923, can fail to realize its tremendous importance in the education of the public as to the development of medical service and the importance of the objectives of organized medicine. The wives, mothers and sisters of physicians are in a dual position in that they can secure firsthand information as to the traditions and objectives of the medical profession and that they have access to public opinion through other organizations and through their social contacts, and through such can help all the people to understand, sympathize with and support them. The Council recommends that its members be instructed by the House of Delegates to take an especial interest in the organization of county auxiliaries in every county in which they have not been organized.

Last year we called your attention to the accumulation of data in regard to the history of the medical profession in Kentucky which had been undertaken jointly by this Association through the State Department of Health and the Works Progress Administration. Drs. E. F. Horine and D. P. Hall, historians of the Association, have been in consultation with the Federal Supervisor, Mr. Kenneth Rawlings, and with Miss Louise Morel, who are particularly anxious to secure pictures and letters of and scientific and other writings and textbooks by Kentucky medical authors; in fact, we will not be satisfied until we have combed the State for every vestige of fact that remains in regard to its medical profession. Any members who are interested in any question in medical history are urged to write Miss Louise Morel, 620 South Third Street, Louisville, and she will cooperate in an investigation of it.

You will notice from the program, the emphasis placed on the educational exhibits for this session. Both the scientific and commercial exhibits are larger and better than ever before. These exhibits, combined with the splendid scientific program of the general session, offer a real post-graduate course to the interested student of medicine. For fifteen years this Association has cooperated with the State Board of Health in the enforcement of the Medical Prac-

tice Act and other health laws for the protection of our people. Last year, the House of Delegates authorized the expenditure of not to exceed \$1,200 for this purpose. The Council recommends that this amount be appropriated for next year and that it be continued. It has not been necessary to use any part of this appropriation for the past several years, but it is important that it be available in case an emergency should arise where it might be needed. We desire to again urge the county societies to bring to the immediate attention of the State Board of Health any practice of medicine by unregistered practitioners. Such information should be sent in as soon as such illegal practice is started, and when it can be accompanied by the names of witnesses upon whom these people have practiced, it expedites the necessary legal procedure.

The Council again calls the attention of the profession to the law providing for pre-marital physical examination to determine the presence of venereal disease before issuance of a marriage certificate for both men and women. This law will become effective on March 1, 1940. During the past year the Advisory Committee on Syphilis Control cooperating with the Bureau of Venereal Diseases of the State Department of Health has held a number of conferences with the county medical societies and has prepared articles and editorials to effectuate the purposes of this Act. Its successful operation will mean a considerable reduction in the incidence of venereal disease and it is essential that the members of the profession acquaint themselves with the procedure under it, so as to avoid the scandal that has resulted from the minority group of the profession in many states which have failed to comprehend the importance of such a law. The State Department of Health has doubled the capacity of its Kahn Laboratory and is now making every effort to expedite the rapid and accurate examination and report of all specimens sent in to it.

We recommend that the appropriation of not to exceed \$1,200 for expenses of the Committee on Public Relations be continued for next year.

Last year, the House of Delegates approved a constructive program inaugurated by Governor Chandler and his Commissioner of Welfare, Mr. Wallis, for the improvement of the state hospitals for

the care of the insane and feeble-minded. A committee under the chairmanship of Dr. W. E. Gardner has acted in an advisory capacity to the Commissioner of the State Welfare Department, Miss Margaret Woll. It is a pleasure to commend Miss Woll for the improvement in these institutions which she has accomplished so successfully in so short a time. We desire to congratulate the administration on the removal of positions in our state hospitals for the insane and feeble-minded from partisan politics, and the adoption of measures which insure the appointment of qualified physicians, nurses, dentists, and other personnel for these institutions, and we desire especially to congratulate Dr. J. G. Wilson, Director of the Division of Hospitals and Mental Hygiene of the State Welfare Department, for his unswerving loyalty to the cause to which he has devoted his life. It will be recalled that the Director is selected by the Commissioner of Welfare with the approval of the Governor from the list of three names submitted by the Council of this Association.

The Council desires to express its appreciation to the Governor of Kentucky and to the members of the General Assembly for their confidence in the organized medical profession of Kentucky. We appreciate the assurance of the Governor that the administration of the mental institutions has been definitely removed from party politics, and the personnel in them will be forever freed from partisan political activity. No other Governor in the history of the State has made such a careful study of the problem of the insane and feeble-minded, and of the prevention of the causes of these conditions, and this assures those who know him that Kentucky is happy to be freed from the disgrace from which it so long suffered through political and unscientific degradation of its institutions for the care of the unfortunates. The Association should pledge its continued support to the Governor and to those of his successors who sincerely and conscientiously preserve the integrity of this high policy.

On January 26, 1939, Dr. Marshall McDowell, Treasurer of the Association, died. Coming from an illustrious medical family, Dr. McDowell had every qualification which endeared him to his own profession and to the people of his county. The Council desires to record its deep appreciation of the fine service

he rendered this Association throughout his professional life.

The Council unanimously elected Dr. Amlias W. Davis, Madisonville, as Treasurer to succeed Dr. McDowell, and we request that his election be ratified.

At the meeting of the American Medical Association in St. Louis, Dr. E. L. Henderson was unanimously elected as a Trustee to succeed Dr. Allen H. Bunce, Atlanta, whose term had expired and who was not eligible for reelection. Dr. Henderson has been President of the Jefferson County Medical Society, Chairman and member of many important committees of this Association, and is a Councilor of the Southern Medical Association, and is in every way worthy of the distinguished honor and responsibility conferred upon him by the American Medical Association. Owing to the possibility of a called session of the American Medical Association, Dr. Henderson resigned as a Delegate, and the Council unanimously elected Dr. J. Duffy Hancock, Louisville, to succeed him and it requests the ratification of his election.

We desire to reiterate and reemphasize the purpose of the organized medical profession in Kentucky to maintain intact the prestige, influence and standing of the physicians of this Commonwealth. It is our high purpose continually to extend our knowledge of both disease and health, so to utilize our knowledge in practice that we can ameliorate or cure or prevent the one and preserve the other wherever either is possible for our people. We are opposed to the socialization, federalization or lay control of medicine in any shape or form; it is our purpose to maintain under any program which may be adopted in Kentucky, free choice of medical advisers for our individual citizens. To these ends this association instructs the State Department of Health and the County Health Departments that their most important obligation is so to cooperate with other branches of the medical profession and with the people that they may be kept so informed of the facts in regard to the practice of the art and science of medicine that they will continue to repose their confidence in the only trained body of knowledge, thought and action that can give them any real hope for cure or prevention of disease.

The closing note in every report of the Council since its organization has been

to emphasize and reemphasize the paramount importance of the preservation of the integrity of the active organization of the county medical societies themselves. The proposed development of the National Health Program causes us to reiterate this recommendation this year as of utmost importance; we have been experimenting with plans for medical care of the indigent successfully in Fayette, Jefferson and Kenton Counties, and it is perfectly evident that we will not be in a position to provide effectively for the medical care of our people in counties where its medical profession does not meet in regular session, so that they can mutually agree upon economic plans for medical service. It will be an idle thing to think that the Congress of the United States or the General Assembly of Kentucky will provide additional funds for medical care for all the people, if all that is to be attempted by such increase in public expenditure is payment to the profession for what it is already doing.

It is contemplated that medical care for all the people may be provided and the profession must be organized in every county in Kentucky so as to be able to secure for its people and for themselves the benefits to be derived from the development of such a National Health Program.

The Council again wishes to express its very deep appreciation for the very splendid support which it has received from the medical profession of Kentucky. It will continue its utmost in its efforts to accomplish the purposes of this Association as expressed by its House of Delegates.

PRESIDENT GARDNER: According to custom, this report goes automatically to the Committee on Report of Council. It will be studied by them, with the request that they report back to us sometime today, either late this afternoon or tonight. I would like to say however, that that portion of the report referring to the report of the Committee on Medical Economics will be held up, of course, until the House of Delegates has had an opportunity to hear that report and discuss it. In other words that is the report of a committee which should stand on its own, and yet incidentally the Council heard that report and has recommended that it be approved.

The balance of the report will now go to the Committee on Report of Council, of which J. P. Glenn, Russellville, is Chairman, and J. H. Pritchett, Louisville, and Clark Bailey, Harlan, are members. When the committee makes its report tonight, discussion will be in order.

Next on the program is the report of the Treasurer.

A. W. DAVIS, Madisonville. I suppose, Mr. President, the report of the Treasurer is in the hands of the Secretary.

SECRETARY MCCORMACK: It has been published.

PRESIDENT GARDNER: You are familiar with the report of the Treasurer as published in the Journal. It goes to the Auditing Committee and is so referred. Next is the Secretary's report.

REPORT OF SECRETARY

SECRETARY MCCORMACK: Mr. President, I have a very brief report. My activity as Secretary this year has been made very simple because all of the committees of the Association, the Council, the President, the President-Elect, and all of its officers have functioned completely and fully. The Secretary's job is to do something when none of them do it, and he has had very little to do.

We have had more meetings of our county societies than we have had before since the first year following reorganization of the State Medical Association. That is one of the most gratifying things that has happened. We have a lot of very definite problems that will be presented in the reports of several committees, that are of vast importance to the people and to the profession of Kentucky, and I know you will hear these reports with a great deal of pleasure and will act on them with the discrimination which has always been the policy of this organization.

I have been a very happy Secretary this year.

PRESIDENT GARDNER: I will entertain a motion that this report of the Secretary be approved.

C. A. VANCE, Lexington: I so move.

The motion was seconded and carried.

PRESIDENT GARDNER: Next is the reports of Councilors by Districts.

FIRST DISTRICT

V. A. STILLEY, Benton: It is always a great pleasure to me, of course, to try to represent the First District, and I can

say truthfully that this year we have had more meetings of the different county medical societies in the First District than we have had for a number of years. You have noticed in the report in the August issue of the Journal there was a loss of two in the Councilor District. Of course that report had to be published in August, and as a matter of fact we have six or seven more members this year than we had last year. We have been unfortunate in losing two or three of the older members that time will get sooner or later; we are all sorry, and we say peace to their ashes.

The county medical societies, our District Society and our subdistrict society, all have been more active this year than they have been for a number of years; there is more interest manifested. I think a lot of that is due largely to the fact that we have more women's auxiliary organizations in our counties than we have had heretofore. I think credit is due to my better nine-tenths for inaugurating a plan whereby we were instrumental in getting a lot of the doctors and their wives together. We had what you might call a Dutch supper. Each member of the auxiliary, or her daughter, or any nurse that happened to be in the county was invited to come to luncheon (which happened to be at our house) and bring a plate of food of some kind. The doctors then were to entertain the ladies, not especially with a scientific program, but with a paper of general interest. One of the papers read was Medicine as a Profession. They were all interested in that. If a doctor's wife isn't interested in his profession I don't know who might be. It was a complete success. We had a lot of compliments on it, and I want to say to you doctors you will have more to eat than you have had for a long time and it will last you for two or three weeks. I thought I had had three or four birthdays because there was so much food brought in. It was rather unusual and unique and we did have a mighty good time.

Next time we doctors have to entertain the ladies. They are going to put on the program and we have to furnish the food. I don't know whether we will cook it. We may send for our President-Elect, Dr. Scott, and have him do the cooking. At any rate, the Auxiliary has had a lot to do with the enthusiasm and with the work that is done by the med-

ical society. It is always a pleasure, as I said, to report that we are doing well, we think, in the First District.

SECOND DISTRICT

SECRETARY MCCORMACK: I have Dr. Griffith's report:

The merit of my 1939 report is embraced in the simple statement: 1939 has an increase of nine members over 1938.

THIRD DISTRICT

C. C. TURNER, Glasgow: The Third District is composed of the following counties: Allen, Barren, Butler, Christian, Cumberland, Edmonson, Logan, Metcalfe, Monroe, Todd, Simpson, and Warren.

There are a total of 164 doctors in the District; 132 of whom are members and 32 non-members. This is practically the same census as has obtained for the past several years. There are a few newcomers, but those taken by death and those retired just about offset the increase.

Regular monthly meetings are held at Glasgow, Bowling Green and Hopkinsville. Those held at Glasgow are attended by the doctors of Barren and the surrounding counties of Allen, Cumberland, Hart, Metcalfe, and Monroe. This group compose the staff of the T. J. Samson Community Hospital. The meetings are well attended and the scientific programs are excellent; they consist of case reports of two hospital patients and one or more scientific papers.

In addition to the monthly meetings held at Bowling Green of the Warren and Edmonson medical profession, there are six or more district meetings per year at which time all the doctors of the entire Third District are invited. The program is given by one or more guest speakers, either from Louisville or Nashville, in addition to one or more local speakers. These meetings are well attended and besides the scientific program a delightful dinner and social hour is held at the Helm Hotel.

Christian County holds regular monthly meetings which are well attended, and an annual meeting which is attended by the doctors of Christian and surrounding counties. The program at the annual meeting is given by guest speakers, this year by the Councilor of the Third District and Dr. C. C. Howard, both of Glasgow.

Owing to the fact that there are so few doctors in the other counties, regu-

lar monthly meetings are not practical. Besides the occasional meetings held in the county, these doctors usually attend the ones held in the larger counties.

Most of the counties have a woman's auxiliary. The Samson Community Hospital Auxiliary, Glasgow, is one of the largest and most active in the State.

FOURTH DISTRICT

J. I. GREENWELL: The Fourth District has nine counties, and the paid membership is about the same as last year. Most of the counties have regular organized medical societies, but this is about all they have as they meet only once each year. At these meetings they elect officers, appoint delegates to the State meeting, and a few pay their dues for most of the doctors in the county will the coming year. Other counties have regular meetings each month with a good program at each meeting, and you find attend the meetings and in such counties you find very few non-members. We had two district meetings during the past year with a good program at each meeting. We had good attendance from the county in which the meetings were held as well as from the adjoining counties, and we had quite a large delegation from Louisville. These meetings were held at Munfordsville and Bardstown.

The Muldraugh Hill Medical Society, located in this district, meets quarterly at Elizabethtown. Most of the doctors in my district are members of this society and attend regularly.

FIFTH DISTRICT

J. B. LUKINS, Louisville: The affairs of the Fifth District are in good shape. During the year a new county society was organized in Henry County, and a Tri-County Society, composed of Gallatin, Carroll, and Trimble, was organized at Carrollton.

We had a District meeting at Carrollton in May, which was said to be quite a success. By the way, I don't think I will ever have another one the last week in May. This has been the custom for many years, but the American Medical Association and two or three other national organizations meet about this time, and I find it is about the worst week that we could select for our annual meeting. Dr. Vance had a meeting

the same night, and one other Councilor in the State had his the same night. I was invited to both of those, and, of course, I was very sorry I couldn't attend.

PRESIDENT GARDNER: Did you have the best attendance at your own meeting that you had ever had?

J. B. LUKINS: No. We had a splendid attendance but not quite as good as last year. The program was varied, interesting, and completely furnished by our own members. (Applause by Dr. Scott.) I am glad to see that our President-Elect agrees with that sentiment. As far as possible, we believe that this plan should be carried out. As a rule, the more papers our own members prepare, the more they enter into the discussions, the more interested they become and the better doctors they are.

We have been invited by the Franklin County Medical Society to meet in Frankfort sometime during the month of December. Dr. Morris Fishbein will be the principal speaker. We hereby now extend an invitation to every member of this organization to be present, and it will be time well spent.

We note again the scarcity of active physicians in some counties in our District, and ask the cooperation of the Economics Committee towards furnishing adequate medical care to these communities.

SIXTH DISTRICT

W. B. ATKINSON, Campbellsville: I have no particular report to make of the Sixth District. It is just about the same as it has been, except that we have lost one of our most distinguished members who was a Past President of the Kentucky State Medical Association and for a long time was Chairman of the Council of the Kentucky State Medical Association, Dr. R. C. McChord.

There have been and are now in our District at least twelve men of forty years of age or younger. There is one in Adair, there is one in Green, there are two in Taylor, there are three in Marion, one in Washington, there are two in Boyle, one in Mercer and one in Anderson, and it looks like the problem of the younger men will be solved as adequate opportunities in those locations present themselves for them to make a decent living.

EIGHTH DISTRICT

SECRETARY McCORMACK: Mr. President. Dr. Hafer is not present on account of illness, and he has asked me to present to the House of Delegates his resignation to be effective immediately. I move that it be accepted and that we express to Dr. Hafer our appreciation for the service he has rendered not only as Councilor but as a member of the profession for many years.

PRESIDENT GARDNER: You have heard the motion. Is there a second?

C. A. VANCE, Lexington: I will second the motion. The motion was put to a vote and carried.

SECRETARY McCORMACK: Mr. President, a suggestion has been made by the Delegates from the District that in order that the District may be represented here in this session of the House of Delegates, we elect a member of the Council for that District for the interim until Thursday morning, and I move that nominations be received for Councilor for the Eighth District to fill in that period. The motion was seconded and carried.

PRESIDENT GARDNER: Nominations are in order for a short-term successor to Dr. Hafer as Councilor for the Eighth District, until Thursday morning.

J. D. NORTHCUTT, Covington: It has been the feeling of our society that Dr. Luther Bach should be elected and I nominate him.

A motion was regularly made, seconded and carried, that the nominations be closed and the Secretary be instructed to cast the ballot.

SECRETARY McCORMACK: I cast the ballot. Mr. President.

PRESIDENT GARDNER: Dr. Luther Bach has been elected as Councilor to fill this short, unexpired term of Dr. Hafer, and either he or his successor will be elected on Thursday morning.

NINTH DISTRICT

PROCTOR SPARKS, Ashland: This is my first year as Ninth District Councilor, and probably I have not been as active as I should have been. I like the work very much and promise you more activity in the future. However, I have contacted every society in the district at least once by letter or personal visit and find that the society as a whole has been more active last year.

We had one District meeting held at Ashland on April 21, 1939, for which we were very grateful to Dr. Ellis Allen, Jr., Dr. W. W. Nicholson and Dr. Marion F. Beard, all of Louisville, who gave us an unusually interesting program on varied subjects. Our next Ninth District meeting will be held at Paintsville within the next few weeks.

Johnson County has 11 active members, with 5 non-members in the county.

Greenup County has 10 active members with 2 non-members.

Carter County has 10 active members and 3 non-members.

Floyd County has 15 active members and 17 non-members.

Lewis County has 4 members with paid dues with no regular meetings, and 1 non-member.

Martin County has 1 paid member, 3 non-members, with no meetings held.

Magoffin County has 1 paid member, with 4 non-members. No meetings being held.

Elliott County has 1 paid member, 2 non-members: no meetings being held.

Lawrence County has 9 active members, 1 non-member.

Pike County has 23 active members with 15 non-members.

Boyd County has 40 active members with 5 inactive members.

All together this makes a total of 125 active members. No doubt a few additional members have paid dues the last few weeks which I have no record of. Most of the societies meet monthly except during the hot weather. It seems impossible to organize Magoffin County and keep it organized. Other than Magoffin County, our Ninth District has a very active bunch of doctors.

TENTH DISTRICT

C. A. VANCE, Lexington: I have the honor to submit herewith the following report of the Tenth Councilor District. The Tenth District has 262 paid-up members this year. This is the largest paid-up membership we have ever had in this District. The County Society register is as follows:

County	Members
Bath -----	7
Bourbon -----	17
Breathitt -----	4
Clark -----	13
Estill -----	7

Fayette	123
Jessamine	5
Lee	3
Madison	33
Menifee	1
Montgomery	10
Morgan	2
Owsley	2
Powell	2
Rowan	6
Scott	14
Wolfe	5
Woodford	8

262

There are approximately 52 non-members in the District. Every effort has been made to get into the society all of the eligible doctors and some success has attended our efforts this year. The list of non-members is less than it has been for several years.

Bath, Estill, Jessamine, Lee, Menifee, Morgan, Owsley, Rowan, Powell, Wolfe and Woodford Counties hold occasional meetings.

Bourbon, Breathitt, Clark, Fayette, Madison and Montgomery Counties have held regular meetings this year and these have been well attended and their programs were instructive.

Breathitt, Estill and Menifee Counties have all the doctors in their counties as members of their societies.

The Summer District Meeting was held in Lexington on May 25. There were about 140 in attendance and 120 at the dinner. I wish to say that I do not entirely agree with Dr. Lukins about the dates. We had our meeting the same night that he had his: we had 140 in attendance. The program was as follows:

Administration of Parenteral Fluids, by John W. Scott, Lexington. Head Injuries, Their Interest to the General Practitioner, by R. Glen Spurling, Louisville. The One-Stage Combined Abdomino-perineal Resection of the Rectum for Cancer (paper and motion picture) by Fred W. Rankin, Lexington.

It was a very enthusiastic meeting and many favorable comments were heard on the excellency of the program and on the spirit of the meeting.

The Tenth District has suffered by death the loss of the following doctors since the last meeting of the Association:

Emmet Michael, Beattyville, March 1, 1939.

Michael B. Guthrie, Lexington, June 1, 1939.

Thomas H. Kinnaird, Lexington, June 26, 1939.

F. G. Larue, Lexington, May 25, 1939.

W. P. Roberts, Lexington, July 1, 1939.

William H. McLean, Lexington, January 13, 1939.

Last year the District lost 12 by death: this year this loss is only 6 and is less than we have had for a number of years. All of these men were active in their county society and were highly respected by their associates in practice and by their communities, and all of them will be greatly missed.

Thomas H. Kinnaird was 85 years old. For many years he was a practitioner in Lexington and Fayette County and was greatly respected by all. Dr. F. G. Larue had been active in his county society and was for a term Superintendent of the Eastern State Hospital. Dr. William H. McLean had been an active general practitioner and surgeon for 15 or 20 years. He was always active in the Fayette County Society, and some years ago was one of its officers.

In all my reports to you as the Councilor of the Tenth District I have spoken of the importance of the county society. I am on record many times and all of you have heard me urge the importance of keeping up the interest in every county society. The State Association will suffer very soon if the interest in the county societies is not kept up and advanced in every way possible, so let me urge you again to do everything in your power to help the county society.

ELEVENTH DISTRICT

H. K. RUTTERMORE, Liggett: As Councilor of the Eleventh District I wish to announce the medical profession is becoming more active and is taking more interest in both the local and state societies over previous years.

During the past year we had the pleasure of having two clinics in the Eleventh District. Dr. Barbour and his assistants held a clinic for children, and under Dr. Keith's committee we also had a day of post-graduate work. These meetings were largely attended by the doctors over the whole District, and every doctor who attended the clinics and all-day meeting went away very much impressed

and advised me to encourage the continuance and broadening of the scope of these clinics in our District.

I believe the New Deal is on the run and if the medical profession will sit tight and use a little common sense, the thought of socialized medicine will be a thing of the past.

PRESIDENT GARDNER: Next is the reports of Delegates by Counties. I trust these will be made as brief and snappy as possible because in some instances there will be perhaps some duplication of reports already made by Councilors. If any of you of the separate counties have anything of special interest which you would like to bring before the House of Delegates we will be glad to have you make it brief and snappy.

BARREN COUNTY

PAUL S. YORK, Glasgow: Barren County has 19 paid-up members, representing a net loss of one through death, and since the report was sent in we have lost one other by death, Dr. Carroll of Cave City. The remainder of the report was included in the report of our Councilor, Dr. Turner.

BELL COUNTY

U. G. BRUMMETT, Middlesboro: Bell County has 32 active practicing physicians; 21 are members of the local society and have paid dues. The society meets monthly, alternating its meeting place in Pineville one month and in Middlesboro the next month. Our president is C. B. Stacy, and Edward Wilson, Jr., is secretary.

BOURBON COUNTY

JAMES A. ORR, Paris: There is nothing unusual about Bourbon's report. We have about the usual number of members and about the usual number paid up. We meet monthly and generally have some outside talent on our program. We almost always have a dinner meeting each month. This was an idea promulgated by our late esteemed associate, Dr. Daugherty, who had been responsible for Bourbon County Society for many years. The spirit of enthusiasm for a medical program still holds over in our county society. We have a dinner meeting each month. Those of us who want to come do so and those who don't, don't, and nothing is thought about it, but the majority of the members usually come, and if we don't furnish much of a crowd for

our essayist we give them something to eat.

BOYD COUNTY

S. C. SMITH, Ashland: Boyd County has gained three members over last year. It meets regularly. We have a better attendance and more interest in the meetings, I think, than we have had for many years. We have only five doctors in the county who do not belong to the society. In addition to entertaining the Ninth District Society meeting, the Boyd County Society participated in the cancer control drive which was put on by the Woman's Army for the Control of Cancer. Every member volunteered to take some part of the work, and we think that we did some good.

CALLOWAY COUNTY

J. A. OUTLAND, Murray: Calloway has 13 doctors, 11 active and 2 retired. All of the active doctors are paid up in the society. We meet quarterly. Our meetings have been some better this year than last year, but still are not exactly what we would like to have them.

CHRISTIAN COUNTY

D. M. CLARDY, Hopkinsville: Christian County has enjoyed a good year. They have 32 paid members. Six members of the staff of the Western State Hospital belong to the county society. Three physicians in the county are eligible for membership but have not paid their dues. We have regular meetings on the third Tuesday night of each month, and we send out about 100 invitations each month to physicians in the surrounding counties and we do have good attendance. Some of the counties surrounding don't have enough physicians to actively support a medical society, and by inviting them and enabling them to have one or two meetings a year they can benefit by our programs. By request of Dr. Lyon, the Superintendent of the Western State Hospital, we would like to have a joint meeting of the Christian County and the Third District societies at the next regular meeting time of the Third District. Dr. Gardner has spoken of a lot of improvements, and I would like personally for this to be arranged so you can come and see just what is taking place.

CUMBERLAND COUNTY

W. FAYETTE OWSLEY, Burkesville: We have in Cumberland County 5 doctors, 4 of them paid up, and I am about the

youngest and the most active one of them.

DAVIESS COUNTY

W. H. PARKER, Owensboro: We have a very active society in Daviess County, with a total of 41 members. We meet twice a month from September to June. I think one of the best things we have done in Daviess County in the last few years has been the promulgation of the erection of a new hospital. Our hospital facilities have been very inadequate and in the Daviess County Medical Society three years ago next January we started the move to get a new hospital. We finally induced the county and the city to put up \$150,000.00 and obtained \$125,000.00 through WPA, and our hospital is now well on its way to completion.

FAYETTE COUNTY

ERNEST BRADLEY, Lexington: Fayette County has the same number of meetings every year; in other words, we have one meeting of the Fayette County Medical Society every month. It is on the second Tuesday, and on the first Tuesday and the third Tuesday of the months we have a clinicopathological conference at the two hospitals. Fayette County has 123 paid-up members, which is the largest number of members that they have ever had. I don't think the percentage of those eligible is any greater than in the past, because with the Veterans' Hospital there and the Narcotic Farm, we have more doctors who are eligible to membership. We have a very active society, and I think that we follow the plan of having scientific sessions, the papers being given by members of our own society, two papers each month. Once a year for the last two years we have invited outside talent to come in, and we have one big meeting to which we invite the members of the various county societies in the adjoining counties. This year Dr. Perry Pepper, who is President of the American College of Physicians, gave the meeting and it was very successful.

FRANKLIN COUNTY

W. P. BLACKBURN, Frankfort: The Franklin County Medical Society has held nine regular monthly meetings since the last annual state meeting. As is usual, the society adjourned for the three summer months. The society had at its separate meetings the following programs and guest speakers: Dr. Emmett Horine, of Louisville, who gave a paper on Cardiac

Emergencies, illustrated by lantern slides; Dr. Scott Breckenridge, of Lexington, on Maternal Mortality; Dr. Robert Kelly, of Louisville, Most Common Skin Diseases; Dr. A. B. Loveman, of Louisville, Treatment of Syphilis.

One meeting was held at the newly developed private park of the State Institution for Feeble-minded Patients. Dr. Adams and Dr. Youmans were joint hosts, and a barbecue chicken dinner with all accessories was served and greatly enjoyed. Another meeting was a dinner meeting at the home of Dr. Grace and William Snyder. Dr. M. D. Klein, of Shelbyville, was invited guest to this meeting. Dr. R. N. Lawson transferred his membership from our society to the newly-organized society in his home county of Anderson. The society lost by death this spring its oldest member, Dr. J. S. Coleman. Two new members were added, Dr. Arthur Casey and Dr. L. T. Minish, Jr., which makes our total membership number 26.

Officers for the past year have been: Dr. B. B. Baughman, President; Dr. W. P. Blackburn, Vice-President; Dr. Grace Snyder, Secretary and Treasurer, and Dr. W. P. Blackburn, Delegate.

GRANT COUNTY

PAUL E. HARPER, Dry Ridge: We in Grant County feel that we have one of the most active small county societies in the whole state. As is the habit of Grant County, we have 100 per cent paid-up membership, with all active members in our society interested and attending our meetings as regularly as practical with their practice.

Grant County Medical Society was organized eight years ago with 12 members. Since that time three of our members have died and two have retired from practice on account of ill health. Three young physicians came to us to fill the vacancies so badly needed, and in the last month two other physicians have opened up offices in our county seat. This replaces our original number of 12 active practitioners in Grant County, all of whom affiliate with the Grant County Medical Society.

The indigent of our county have not suffered for the want of medical attention. Our doctors are generous in caring for the needy poor. Only a few times has the Fiscal Court had to give medical assistance. No epidemics of any kind have hit us during the past year. A few

cases of diphtheria have been kept from spreading by the close attention of the Health Department.

We have had 187 live births during the past year, with only 5 stillbirths and no puerperal deaths. Typhoid fever is an unknown quantity with us, and other contagious diseases have caused us very little trouble during the past year. We had 106 deaths in our county during the past year, heart trouble being the leading cause and cerebral hemorrhage being close second.

Our time of meeting is the third Wednesday in each month, which is well attended. We meet in the homes of the different physicians each month until our December meeting when we wind up the year with a banquet, election of officers and collection of dues.

We have also had a cancer program in our county and have cooperated to the best of our ability with the state department.

HARLAN COUNTY

CLARK BAILEY, Harlan: In Harlan County we have approximately 150 members of the medical society, practically all of them paid up. We have a meeting each month, following a dinner. That plan provides for us greater attendance. We have had a rather enthusiastic bunch of doctors in the county, with splendid attendance at our meetings.

HARRISON COUNTY

W. B. MOORE, Cynthiana: The Harrison County Medical Society for 1939 has 13 members with dues paid, and a loss of four members from the previous year. One member was transferred from another county, making a total of 14 members.

Ten regular meetings and two called meetings have been held. The attendance has been fair, which is due largely to visiting physicians from other societies. The largest attendance was 31 and the smallest 6. Only two papers were read by members of our society; the remainder were papers read by visiting physicians. This condition, in my judgment, is not to the best interest of our society. It is true that we have better attendance when visiting physicians read papers, but I am sure it is better for the society when its members are sufficiently interested to prepare papers for most of its meetings.

During the past year our society has lost four of its most enthusiastic mem-

bers, two by death, and two by reason of advanced age and ill health are no longer able to attend our meetings. It is a fact to be deplored that the younger members of our society are not manifesting the interest that characterized our meetings in years gone by.

HOPKINS COUNTY

A. W. DAVIS, Madisonville: It seems as though I have to do everything that is to be done for Hopkins County. Dr. J. D. Sory, who was elected delegate of the society, has something more important to do right away, he is going to get married. The Hopkins County Medical Society did not hold regular meetings during the past year. There were several called meetings and one open meeting held at the Country Club in July. On February 1, the new Hopkins County Hospital was opened. It is one of the most modern institutions in the state, with a 70-bed capacity. During the year, W. P. Ross, the oldest general practitioner in our county, passed away. R. L. Bone, who is now the oldest general practitioner in Hopkins County, is moving his permanent residence to Florida. Dr. William H. Garnier, of Oklahoma, and Dr. Frederick A. Scott, of West Virginia, have located in Madisonville during the past year. A. W. Davis, Madisonville, has been duly elected delegate to represent the Hopkins County Medical Society at the state meeting in Bowling Green.

Respectfully submitted,

DAVID L. SALMON, *Secretary*.

JEFFERSON COUNTY

W. B. TROUTMAN, Louisville: The Jefferson County Medical Society has 433 members in good standing and 24 delinquent members. At last year's meeting, which was held almost a month later in the year, we reported 435 members in good standing and 16 members delinquent.

On our Physicians' Exchange, which is optional, we have 159 members using the service.

Eleven regular meetings of the society have been held thus far this year. We have had three guest speakers, as follows: On January 16, Dr. Edward C. Ellett, of Memphis, Tennessee; on March 6, Dr. M. Edward Davis, from the University of Chicago; and on June 5, Dr. Harry Beckman, of Marquette Univer-

sity School of Medicine, Milwaukee, Wisconsin. We have also had, as a special feature, lectures on a refresher course in pathology given by Dr. Harold Gordon of the Department of Pathology, University of Louisville Medical School.

MCCRACKEN COUNTY

LEON HIGDON, Paducah: McCracken County Medical Society meets in Paducah each month for a dinner meeting, except the months of June, July and August, at which time there are two scientific papers presented by members of the society. Once each year we have a guest speaker. Once each month the Illinois Central Railroad Hospital and Riverside City Hospital have a scientific meeting. Once each year the society acts as host to the Southwest Kentucky Medical Society, at which we have a good attendance with six or seven out-of-city guest speakers. The Riverside Hospital, which is our municipal hospital at Paducah, is making a very fine improvement which will bring our total hospital beds to 100. We expect to be in our new building by the first of January.

There are 43 active paid-up members in the county society, there being only 4 doctors in the county who do not belong and these being on the inactive list.

MADISON COUNTY

ROBERT SORY, Richmond: The Madison County Medical Society has had another very good year. Out of 32 practicing physicians in the county we have 29 paid memberships. We have met regularly each month this year except the months of July and August, with a good scientific program at every session, usually two scientific papers. The Madison County Society is in good condition and is doing good work.

MASON COUNTY

O. M. GOODLOE, Maysville: Mason County has 20 members, which is a gain of 2 in this present year and makes every eligible physician in Mason County a member of the Society. We have regular monthly meetings with scientific papers read by our own men. So far this year we have not had any guest speakers. Everything is in excellent condition, except we have been unable to get a good auxiliary going.

PERRY COUNTY

R. L. COLLINS, Hazard: Perry County has 35 active doctors, 32 of whom are

paid-up members. The Perry County Medical Society has regular monthly meetings at which a paper is read, probably not a scientific paper. We have one meeting each year, a dinner meeting, at which the ladies of the medical profession are invited to be present. We have had three visiting doctors this year who have discussed heart diseases, post-operative surgical conditions, and the prostate. These subjects were all enjoyed by the members of the profession.

Perry County has an excellent health department, which cooperates in every particular with the medical profession in securing the immunization of school children and which cares for the general health of the indigent in the county.

PULASKI COUNTY

J. H. HORTON, Burnside: Pulaski County Medical Society has 18 members. This includes all of the physicians in the county with the exception of five, and these men are practically inactive. The activity of the unlicensed practitioners in the county has diminished some in the past year. That has been due largely to the education of the general public.

The society has held a number of meetings during the year, and these were all characterized by good attendance. Each fall for the past few years we have been host to the Sixth District and Seventh District and we are planning another meeting of this nature this fall.

TAYLOR COUNTY

C. V. HIESTAND, Campbellsville: Taylor County has only eight physicians in active practice, seven of whom are eligible for membership in our county society. We hold regular meeting there, except in July and August when we frequently don't met, but we attend the Muldraugh Hill Medical Society and have another district society. We have not had any typhoid in Taylor County for a number of years to amount to anything. We are making wholesale typhoid vaccination and keeping pretty well vaccinated, and it is practically eradicated from the county. The doctors are all eating out of the same porringer and all getting along fine.

PRESIDENT GARDNER: We are very glad to have had these short, snappy reports. I think we have consumed less time than usual on the reports of Delegates from County Societies.

Next is the report of the Delegates to the American Medical Association.

SECRETARY MCCORMACK: I have a report signed by Dr. Henderson and myself, and without objection I would like to ask that Dr. Hancock read this report, as he is younger and more active than I am and has a bigger voice.

J. DUFFY HANCOCK, Louisville: Due to the unavoidable absence of Dr. Gardner at St. Louis, I was given the privilege of attending the meetings of the House of Delegates, and this is such an excellent resume of the meeting, which was a most important one, that I trust you will give me your indulgence to read it, submitted by Dr. McCormack and Dr. Henderson:

One hundred and fifty-three of a possible total of 175 delegates were present when the House of Delegates of the American Medical Association convened for its 90th Annual Session in the Hotel Statler, St. Louis, on Monday morning, May 15, 1939. This number represented one of the largest registrations in advance of any meeting. Later arrivals brought the total number of delegates registered before the close of the session to 168.

One of the first matters to occupy the attention of the delegates was the bestowal of the Distinguished Service Award of the American Medical Association for the second time since its establishment at Atlantic City in 1937. Dr. Rudolph Matas, (New Orleans, having been the first recipient at the 1938 session in San Francisco. Dr. James B. Herrick, Chicago, Dr. Chevalier Jackson, Philadelphia, and Dr. Edward Jackson, Denver, selected by the Board of Trustees by ballot from a list of five nominees submitted to it by the Committee on Distinguished Service Award, were presented to the House. The name of Dr. Edward Jackson was dropped after the first ballot and Dr. James B. Herrick, receiving a majority of votes cast on the second ballot, was declared elected by the House of Delegates to receive the award.

The speaker, H. H. Shoulders, in a brief address, felicitated the House of Delegates upon the fact that upon a review of the proceedings of the House of Delegates over a period of many years, one finds that notwithstanding its large membership, its short annual sessions with limited opportunity for deliberation and debate, the scattered regions and wide variety of local interests repre-

sented, and the vital importance of the issues it is called upon to determine, "a golden thread of consistency" with the fundamental principles to which the House has given allegiance runs straight through its proceedings, and it is this loyalty to its principles and ideals, coupled with its democratic methods and faith in each other, which has held its errors to a minimum and prevented "actions taken in one session from being in conflict with actions taken in another session one or many years before." "In my opinion," said Dr. Shoulders, "we have thus won a liberal measure of public confidence. I know of no other group of men who have stood by convictions or even observed pledges with greater fidelity. I entertain the belief that the time will come, maybe soon, when a grateful public will applaud our loyalty to ideals and principles, as was done not so long ago."

Irvin Abell, of Louisville, in his presidential address, reviewed the activities of the various councils and bureaus of the American Medical Association, many of which, he pointed out, have reached their peak development in the past year. Dr. Abell dwelt especially upon the program for participation of the Federal Government in health activities presented by the Technical Committee on Medical Care, a sub-committee of the Interdepartmental Committee to Coordinate the Health and Welfare Activities of the Federal Government to the National Health Conference held in Washington last July, which recommendations were carefully considered by the House of Delegates in a special session held last September, and the attitude of the American Medical Association toward them was clearly defined in the report of the reference committee adopted by the House. "Your committee," said Dr. Abell, "closely adhered to the principles and policies adopted by the House of Delegates both at its special session and at its previously held regular session. Discrepancies between the data and statistics assembled by the Technical Committee on Medical Care and those assembled by the American Medical Association were emphasized where such might ultimately influence the application of the Technical Committee's recommendations. Expansion of public health, maternal and child welfare services with limitation of curative measures

to private practice where available; utilization of vacant beds in present hospitals on a per diem basis; the construction of new beds and diagnostic health centers on a basis of economic, geographic and health needs with standards for hospital administration and professional personnel; perpetuation of hospitals and health centers; the formulation of plans for the care of the medical needy determined by local and financial needs under medical and local state supervision; the approval of sickness compensation and of voluntary insurance for hospital and medical service; and unqualified opposition to the suggestion in recommendation IV that the individual states initiate studies and plans for the care of all their people on a tax basis, are briefly the points for which your committee contended."

In an interview with the President, arranged by the Surgeon General of the Public Health Service, Dr. Abell outlined the position of the American Medical Association to each of the five recommendations made by the Technical Committee.

Dr. Abell also discussed the National Health Act of 1939, otherwise known as the Wagner bill, and after pointing out that this bill proposes expenditures of \$98,250,000, \$123,500,000 and \$334,000,000 for the fiscal years 1940, 1941 and 1942, respectively, "with no limit on the amounts during 1941 and 1942 for public health work, for grants for mental and tuberculosis hospitals, for grants for medical care, for grants for temporary disability compensation and for administration, and, further, that for the fiscal years subsequent to 1942 there is no specified limit on the expenditures for the accomplishment of any of the purposes of the Act," said further:

"While no specific mention is made of compulsory sickness insurance, the measure introduces the principle of allotment of federal money to the individual states for medical care, by the Social Security Board, without specifying the means to be used in the individual states for providing such service other than to demand the approval of the Social Security Board, being silent as to the permissible extensions and improvements of medical care that a state may make and as to whether such care shall be provided through a state medical service or

by a system of state health insurance or by payment for services on a fee basis.

"The administrative agencies mentioned in the bill are the Children's Bureau, the United States Health Service and the Social Security Board, final and complete authority for carrying out the purposes of the Act resting in these three departments. Granting the occurrence in a rural or isolated community of disease which from their classification would come under each and all three of these agencies, satisfactory and competent administration would seem difficult, if not impossible. Such a contingency but enhances the contention of the American Medical Association for a Minister of Health, a unified agency for the correlation of all health activities. The bill does not provide for means of determining the local need for the various services it proposes to furnish, a matter of importance repeatedly emphasized by the House of Delegates, and no stipulation as to the utilization and improvement of existing hospitals is mentioned. These are but a few of the points that demand your consideration and study in aiding in the development of a health program for the nation, to which we are by experience, knowledge and conviction committed, its fundamental objectives being an expansion of public health, maternal and child welfare services, approved care to the indigent and the medically indigent, and an extension of hospital and diagnostic facilities."

Concerning the indictment of the American Medical Association obtained by the Department of Justice, charging monopolistic practices operating in restraint of trade, Dr. Abell said:

The fundamental point at issue in the indictment of the American Medical Association is as to where the power of policing professional organizations shall lie. Heretofore by common consent this power has been vested in the organizations themselves, which have established standards of qualification, training, attainment, character and conduct for those desiring to enter their ranks and for members desiring to remain in their ranks. This power has been exercised in good faith and with good intent for the protection of the public. Should a conviction be obtained and upheld by the appellate courts, the policing power would be transferred to the Federal

Government, which would then determine qualifications for membership, articles of expulsion and the like . . . The House of Delegates at the San Francisco session declared in no uncertain terms its intention to see the then threatened indictment through to its ultimate conclusion; the principle involved is one on which there can be no compromise."

In an address as President-Elect, Dr. Rock Sleyster, Wauwatosa, Wisconsin, suggested that threats to the science of medicine by social and governmental agencies during the past few years have occupied the attention of the House of Delegates to a degree which has resulted in too little attention being given to the purposes for which the American Medical Association was organized and to the established activities in which it is engaged. He pointed out that the American Medical Association always has assumed and always must assume the responsibility of medical progress and the defense of all that has been accomplished in the past, but that occasionally an officer of one of the many medical organizations—many of which he believes are unnecessary and constitute a drain on the time and interest of our members—in a public interview or speech "expresses endorsement of policies in conflict with those established by this House." "No one," said Dr. Sleyster, "would deny such officer the American right to express his individual opinion, but is he authorized to speak in the name of his society? In these days of danger to medicine, each scientific organization, if in agreement that primary responsibility rests with the American Medical Association, should insist, by the adoption of a standing rule, resolution or otherwise, that its officers, during their terms of office, refrain from public discussion of broad policies of public welfare except such as have been officially adopted by their organizations, in order to protect the membership from being committed without an opportunity for expression of opinion. Even if such speakers definitely explain that they speak for themselves alone, they cannot dissociate themselves from their public offices."

The remainder of Dr. Sleyster's address dwelt upon the part played by the American Medical Association in the correction, in the public interest, of evils

which flourished in the medical profession at the beginning of the twentieth century, and expressed the belief that the same leadership can now be depended upon to effect satisfactory adjustment of present-day problems.

In a supplementary report on the Army Medical Library by the Board of Trustees, Dr. C. W. Booth, Chairman, cited the fact that the Act passed by the Seventy-Fifth Congress authorizing the construction of a new building in which to house the Army Medical Library and a museum, carried no appropriation for the construction of the building and urged that the House of Delegates reemphasize its hope that the necessary funds to construct this building be made available by the Congress without delay, as the need is urgent. A resolution along these lines, introduced by Dr. Henry C. Macatee, District of Columbia, was later adopted by the House.

The report of the Board of Trustees also included a supplementary report by the Committee to Study Problems of Motor Vehicle Accidents. This report took note of the marked reduction in motor vehicle accidents and fatalities since the peak year of 1937, and the committee is convinced that this reduction is due chiefly to education and traffic law enforcement and that further improvement can be obtained if certain facts are comprehended and recommendations set forth therein are adopted.

One of the most interesting phases of the Committee's report was with reference to alcoholic intoxication as a factor in traffic accidents. The results of alcohol tests of the breath conducted by Holcomb in Evanston, Illinois, on 1,750 drivers chosen at random and compared with alcohol tests of the urines of 270 drivers brought to Evanston hospitals following personal injury accidents, were reviewed and the Committee reached the conclusion that the concentration of alcohol in the blood is one of the best criteria of intoxication because blood alcohol concentrations closely parallel detrimental effects noted in carefully conducted experimental tests. For medico-legal purposes the Committee recommended the following interpretation of chemical tests for alcohol:

"1. Although there is no minimal figure which can be set at which there will be absolutely no effect from alcohol, the

committee recommends that persons with a concentration of alcohol of less than 0.05 per cent by weight in blood or its equivalent in urine, saliva or breath, should not be prosecuted for driving while under the influence of liquor.

"2. All persons show a definite loss of that clearness of intellect and control of themselves which they would ordinarily possess when the concentrations are above 0.15 per cent in the blood or its equivalent in other body fluids or breath and should therefore be considered as under the influence.

"3. When the alcohol concentrations are between 0.05 and 0.15 per cent in the blood, a great many of the persons will be under the influence of alcohol, but the committee recommends prosecution only when the circumstances and results of physical examinations give definite confirmation of such influence."

J. DUFFY HANCOCK: That is an important statement to have because of the controversy arising in so many locations where prosecution is now much more active in regard to persons accused of drunkenness.

Other transactions of the House of more than ordinary interest included:

1. Adoption, upon recommendation of the Committee on Medical Education, of resolutions providing that the American Medical Association specifically recognizes the practice of clinical pathology as a specialty of medicine and believes that those persons who practice it and who act as directors of clinical laboratories must be graduates of recognized medical school and licensed to practice in their respective states; also that it is necessary for these persons to complete at least three years of adequate training in clinical pathology in addition to training received in regular courses at medical schools before assuming directorship of clinical laboratories.

2. Rejection, upon recommendation of the Reference Committee on Legislation, of a resolution introduced by Floyd S. Winslow of New York, in behalf of the Medical Society of that State, which proposed "that the House of Delegates of the American Medical Association grant a seat to a woman delegate." The Committee reasoned that a division of the medical profession along the lines of the sex for any professional purpose appears to be unwise; that such a policy would make the Association liable to similar de-

mands from a variety of groups, thus establishing multiple representation; also that women physicians are now entitled to the representation they seek through other channels with the same opportunities for selection that other members enjoy.

Also, upon recommendation of the same committee, a resolution introduced by James M. Flynn, New York, in behalf of the Medical Society of New York, urging that membership in the American Medical Association be not denied solely on the basis of race, color or creed, was not adopted. The committee taking the view that such a policy would imply that the county medical society should not, in effect, have the right of selection of its own members, which is a fundamental principle of the American Medical Association: also readjustments along the lines of the resolution are rapidly taking place in those states most vitally interested.

In the report of the Committee on Medical Care, Dr. W. F. Braasch, Chairman, reviewed the results of a survey conducted by the committee, through individuals and agencies throughout the country concerned with the care of the sick. Some idea of the extent of coverage of this survey may be gained from the facts that returns were received from 763 counties in 37 states, representing an urban population of 15,095,215. The information obtained was so extensive and varied that it cannot be adequately summarized in this brief report. Suffice it to say that it led the committee to the conclusions embodied in the following paragraph:

"To the key question which the survey was primarily designed to answer, as to whether any large section of the population is unable to obtain needed and desired medical care, the answer is so nearly unanimous and universal that it should be considered conclusive. Fully 90 per cent of all the sources consulted reported that they know of no significant number of persons needing and seeking medical care who were unable to obtain it. Nurses, health departments, relief and welfare workers, school and university authorities, industrial and mutual organizations and pharmacists were all asked how many, if any, persons of whom they had knowledge had been unable to obtain needed medical care. They were then asked to comment on any such unmet

need and offer any suggestions as to how it could be met. These suggestions and comments are now being analyzed and compiled, and the results promise to offer a body of helpful criticism and proposals of value in developing better plans for providing medical care."

A resolution introduced by Charles B. Reed, Illinois, proposed that the exhibition of any medical or surgical procedure to lay groups shall first be approved for that purpose by exhibition of the film to the county or state society where the proposed exhibition is to occur or to a board of censors thereof or to the American Medical Association and that exhibitors violating these provisions shall be considered unethical. The Reference Committee on Amendments to the Constitution and By-Laws, to which this resolution was referred, in its report expressed the opinion that the evil complained of could be best settled by local supervision which procedure would not necessitate any changes in the Principles of Medical Ethics of the American Medical Association. The committee recommended that such procedure be followed by state and county medical societies under the circumstances cited in the resolution.

Dr. Walter F. Donaldson, Chairman of the Reference Committee on Consideration of the Wagner Bill, presented a report which was adopted by the House of Delegates without a dissenting vote. This report reviewed the history of the bill, analyzed its provisions, expressed its unalterable opposition thereto, and presented certain conclusions and recommendations which time will not permit me to give here, but with which every physician interested in preserving to the medical profession its inherent rights should familiarize himself and thereby better qualify to contribute his share to the already overwhelming opposition of the medical profession to the provisions of this bill.

The report of the Secretary recorded a most satisfactory growth during the past year, the membership having increased to 113,113 and Fellowships to 70,000. The total registration at the St. Louis session was 7,412, of which number 192 were registered from Kentucky.

By a vote of nearly two to one Atlantic City was selected over Philadelphia as the meeting place for the 1942 session,

meeting places for 1940 (New York City) and 1941 (Cleveland, Ohio) having been chosen at the San Francisco session in 1938 in accordance with plan adopted at Atlantic City in 1937 of selecting a meeting place three years in advance thereof.

The following officers were elected:

President-Elect, Nathan B. Van Etten, New York.

Vice-President, Alphonse McMahon, St. Louis.

Secretary, Olin West, Chicago (reelected).

Treasurer, Herman L. Kretschmer, Chicago (reelected).

Speaker of the House of Delegates, H. H. Shoulders, Nashville (reelected).

Vice-Speaker, R. W. Fouts, Omaha (reelected).

Trustees, Roger I. Lee, Boston (reelected); E. L. Henderson, Louisville.

SECRETARY MCCORMACK: A footnote should be appended showing that resolutions with regard to the Wagner Bill were telegraphed from St. Louis and published in the June issue of the JOURNAL so all of our members are familiar with them.

PRESIDENT GARDNER: This splendid narrative report of the activities of the American Medical Association at its recent annual convention has been of tremendous interest to all of us, I am sure, and a motion is in order to receive and file the report. It is not necessary that it be adopted. This combination report was compiled by Dr. Henderson and presented to you by Dr. Hancock.

C. C. HOWARD, Glasgow: I so move.

The motion was seconded and carried.

PRESIDENT GARDNER: It will be published in our own JOURNAL and you will have access to it later.

Next we will have the report of the Committee on Medical Economics, by C. C. Howard, Glasgow.

C. C. HOWARD, Glasgow: Mr. Chairman and Gentlemen: As you well know, Dr. Gardner appointed this committee during the winter and I was selected chairman.

This word "economics" isn't a good word because it doesn't convey exactly what we all think, but it is the best word available in the English language, and it means the status of people when they are sick, or their care, and the doctor and his facilities for caring for those people.

In Kentucky we have possibly three

million people. In three cities of over 40,000 there are a half million people. There are two and a half million people who live in the small towns and in the rural communities, on the farms. In exact number there are 1,300,000 people, I want you to remember this, who live on the farms, and they should live on the farms and if they don't live on the farms and care for the farms we won't live. It is a very vital thing that Kentucky stay an agricultural country, because it is that, with mining and industry.

This committee has attempted to analyze the medical care of these 3,000,000 people and how it is carried on with the ordinary facilities that the doctors have and where the doctors are located. Of course there are some errors in here, because, as I tell you, this has been a very difficult work. Dr. Crittenden and his staff have gotten this together and the committee has gone over it quite often, and then it was edited and put on the press and sent out to you. Each one of you got one. I hope you have studied it. We tried to analyze every county, 120 of them, and I want to repeat to you we analyzed the medical care of 3,000,000 people.

What do we recommend as doctors for the future care of these people, our people, and how should we fit into a scheme to care for these people which would be fair to our profession as a profession and fair to them as people? The medical profession has advanced wonderfully in its science. Has it all been care for the people? No. It is not our fault, don't misunderstand me; it is not the profession's fault, because the profession is standing the burden now of the indigent. The indigent in Louisville or in some city where you don't go very far aren't nearly the burden that Dunham yonder has when he goes ten and fifteen miles, and he is the only doctor for 8,000 people. He has that care all the time; he has to go to deliver them, and then once he accepts a call he has that case, it is his care, and he is honor bound to see to it. It is quite a different problem and he has no way out of that. He doesn't want any way out of it because he is an honorable doctor, but it is quite a problem.

We have given it a great deal of study and we have tried to arrive at the facts as nearly as we could, and if any gross error has occurred in any county, all you have to do is to write to the Secretary

or to me and we will correct it and send you a supplement. We have worked hard on this volume and we want you to consider it.

There is quite a problem in the whole United States in medical care. The profession has borne more than its share. There are many facilities lacking for the practice of medicine. There are many facilities lacking for doctors to locate in counties. You couldn't blame them because the facilities are not there, but you put the facilities there and young men will come there. I saw all that work out in my own county. I saw many good young men come in because we had better facilities, because we had a great hospital, a good health unit, and had all the facilities for their practicing medicine. Why can't he think as clearly in Barren County as he could in New York or anywhere else? The people are there, the sickness is there, and they need care. It is up to us to help overcome problems. To object to everything is very easy, but this is such a great problem that its solution is going to roll on and it will roll clear over us if we don't help solve it.

Think back twenty years and twenty-five years ago when I rode over a dirt road to go to a county where there was a railroad, to go to study medicine. Do you think all that back country should have waited and said, "No, no, we are going to wait until we can build a highway, we won't take any aid from anybody, we are not going to take any aid from the state, the government or anybody." Do you think they would ever have gotten any of these fine highways? No, never. Two-thirds of the state and two-thirds of the states of the Union are not able to meet all the needs. It has to be done jointly. How to do that is the problem. Of course we must uphold the dignity of the profession; of course we mustn't be sold out and regimented and all that. I am not afraid of that, if we outline a program. We must have the courage to do that. I want to repeat, do you think any of the highways that have come, the bridges, the great parks, the park we visit up at Mammoth Cave, the flood control of the Ohio and all its valleys would have come without any federal aid? Why, didn't Congress vote \$172,000,000 without a dissenting vote just last session? Didn't everybody in Kentucky say it was right? What was that \$172,000,000 for? It was only to

protect property. Get that straight. Not a bit of it was to save life, because every one of you would get out of those valleys before you would drown, but it was right and they voted \$172,000,000 to build walls and control floods. It is all right, gentlemen, I am for it. Well, do you think then it is not right to protect the family or the mother or the child?

When you make the bugle call for these men, where will they come from to defend this country? They will come from all these counties, way up the creek and everywhere. You can look up the record of the World War, and the greatest defense that was ever put up was by those boys. Right out of my district, right out of where we serve came one of the greatest soldiers of the World War, who rode a mule over to Albany—Alvin C. York. They came back from the World War and they built a road through there called the York Trail. He took that notoriety of his and didn't sell it, but he took the money that the people gave him and built a fine school over there for those mountain people, and you ought to go over and see it. They have roads now. The call will come again and those same boys will go. You ought to read the story of that fellow, and don't forget, gentlemen, that you don't want to congregate everybody too much together—sometimes it ruins clear thinking. You read the history of that fellow, how he was raised in the mountains, how his father was one of the first hunters that came to Kentucky and camped up in Wayne County, and how down through generation after generation he had practiced shooting and hunting. Did you ever sit down and talk to him? He is a very remarkable man. Did you read his book, how he shot these men and how he didn't miss a one of them? I will never forget how he proved to the French that his story was true. He told them that he shot everyone of them right over the eye. They couldn't believe that, but when they went and investigated, everyone of them was shot that way. Then they asked him, "How did you get these men that slipped up behind you and tried to come up through this ravine?"

He said, "Well, I watched them, and these men came on closer and closer and I killed the last man first, then the next man, then the next man, the next man, until I killed the last man, he was within three feet of me."

They said, "Why didn't you shoot that man first?"

He said, "Why, don't you know in all hunting, in shooting wild turkeys and all, that if you shoot the first one you scare all of them?"

Do you think there is another man who could have done all that but a boy who was raised way up on the mountain? You don't want to lose that, fellows. General Foch, the generalissimo of the Allied Armies, walked up and pinned a medal on that boy as the outstanding hero of the World War, before every Frenchman, before every Englishman, before every Italian, and everybody else. That was a turkey shooter from over here in the edge of Kentucky and Tennessee. You want to preserve those fellows, gentlemen; you will need them to protect you some day.

As I said, the population is 3,000,000. We have 2,200 doctors in Kentucky. Where are they located? Most of these doctors are located in the urban centers, in the cities. I don't blame them; it is easier to practice there. There are better facilities. Two-thirds of them are located in the cities, Louisville, Covington, Lexington. They are better places to live, better places to raise families. The others are in smaller towns and out in rural communities, and the country doctor at the crossroads is practically gone. This report shows that almost all the doctors live in the county seats, not entirely, but most of them.

Where are the hospitals? We have 72 general hospitals. Almost all of the Grade A hospitals are in the cities. Is it right that these two and a half million people should have only one bed for a thousand people while in Louisville you have one bed for every 209 people? Is it right that all the rest of the state should have to wait and fill all your empty beds before they can add to their hospitals or build any new ones? No, you know it isn't.

You are overcrowded with doctors. Young men are graduating. They ought to locate somewhere. They are well educated, well trained; they need to get out and see if they know anything or if they can do anything. They haven't facilities. Those boys won't go out and start with the horse and buggy, that day is over, and still it was a good day. I still maintain that a man needs to go out and practice himself, not intern his life away and not wear himself out entirely with all his youth before he starts to practice. He needs to try out his hand. The people will settle whether you are a doctor or not. It is not what the school said about

you, it is not what your friends say about you; it is what the public finally say about you that is the final verdict.

Where are the nurses? Two-thirds of all the nurses are in these same centers. Economically the people can't have nurses. The cost of the nursing care and transportation is prohibitive. Many a doctor knows that, and so he doesn't call for them. Many times when he has to call he doesn't know who he is going to get. To show you how the nursing situation has changed in the last ten or fifteen years in our town, we didn't have a graduate nurse. Since we have had a nice hospital we have 22 graduate nurses available in our town and adjoining towns. We have a couple of laboratories that serve all that community, that do all the Kahns, all the ordinary examinations for blood, urinalyses, and everything that goes with an ordinary laboratory, and do it efficiently. That all has come because there is a center.

You say, "Of course you don't need a hospital in every county." No, but you do need a good hospital for every 80,000 to 100,000 people, and I mean a Grade A hospital, as good as anybody's hospital. There might be some things that should not be done perhaps in that hospital, certain things like neurosurgery and foreign bodies in the lungs; maybe there aren't but two or three men in the whole state for those things, and that is perfectly proper and for the good of the people you should use them, but 97 per cent will fall within that community, and think what an economic burden is on those people if they have to be transported here and there and everywhere. They are not able to pay for it.

The nursing question now is under a nursing board. We didn't speak of that here, but on that board should be some good level-headed doctors, because nurses are still nursing patients for doctors.

Did you know that in 25 per cent of the counties of this state last year 40 per cent of the babies were delivered by midwives? You would say that is not right. I know, but that is true just the same, because with the economic condition existing, the doctors not available, the patients not able to pay, the situation just existed and it will exist until there is some way to have more doctors available and until the doctors can be paid a minimum fee for going way over there and taking care of that woman, which

should be done. Midwives, you know, are just registered with the health department or the county board. That is according to the law.

The birth rate of Kentucky is going down, not a great deal, but it is decreasing. That is something to think about. One thing I have observed this summer in our hospital is how the younger men take care of the children, the babies that are sent in. It was remarkable to see how well they straightened those babies out, giving them fluid, blood, taking care of them, educating and training the mother. It is a very vital thing; it means something in the future. I don't know whether you can let that sink in unless you have a family of your own, until you see the other children around you. These children deserve an opportunity.

Tuberculosis! Here is one thing that should wake us up if nothing else will! We have an estimate (and this is a minimum estimate) of 12,000 cases of active tuberculosis in Kentucky today. They are there, too, gentlemen; they are coughing their lives away, and everyone of those active cases will infect others before it dies. There are only two counties in Kentucky that have adequate care for these people, Jefferson and Fayette, and I want to compliment those counties for rising up and taking care of those victims. Those institutions care for those people without cost to the families until you decide that you have done all you can for them, and you will even then protect the others, and the protection of the rest is a great thing. Just think of it, 118 other counties do not have any facilities except the general hospital and Hazelwood for those who can pay enough to go there. Hazelwood is an excellent institution, it serves its purpose, but the average case of tuberculosis is not able to carry on those months and months there. Wouldn't it be much better if in each district there was a small hospital (it might have to be large, too, depending on the number of cases) somewhere connected with or close to a general hospital to care for these people in their district?

I want to repeat, we thought it was all right to build roads and to buy land for parks and to put up money for flood control. Now do we think it is bad if we fix some way to care for these people? I don't think so. I can see in my mind now a mother, a widow with four children, that we sent home the other day

with cavities in each lung, hopeless, but before she dies she is going to infect at least one or two of her children.

Lately I saw one or two of the finest examples of a program on public health, and I commend them for it. Over in Adair County, and in our county, too, but especially in Adair, they have examined all their school children, and I was surprised how many boys and girls in high school they picked out with a minimum tuberculosis. There were quite a few of those came over to us, and with even the care today we cured a lot of them, I think, and that is a very vital thing.

Cancer, all the degenerative diseases, heart disease, and diseases of the blood vessels are on the increase. One of the great reasons is because we have cared for the young people and more people grow old and get past middle age. Cancer, of course, is on the increase; you will read in this report it is on the increase about 71 per cent. I am not a pessimist about it and I am not an optimist because I have already lived too long and observed too many and treated too many not to know that those that are vital, that touch the mucous membrane, usually die regardless of you, me, or anybody, unless you get them real early, and then it is so early you rarely see it. But you can do a great deal for them and they need facilities. There are only two counties in Kentucky that have worked out a satisfactory program for the care of the indigent, and those are Jefferson and Fayette. I have watched them with a great deal of interest and have discussed it with these men. They have worked it out through their societies and through their health departments with the social worker, and the social worker keeps a record of all the people that are indigent or near indigent in each county, and these people then are certified and they have their family doctor. We recommend that the patient should have the right of choice of physician as long as he is somewhere near them, in their community. We do not want to interfere, ever, with the relations between the patient and his doctor. That is vital. These two counties pay their doctor for his services to the indigent. I do not know whether they pay him the full 100 per cent charge or not; I don't think I would; they shouldn't. That has worked out very successfully in Jefferson and Fayette, I want to review some of our recommendations.

Dr. Vance read about the setting up of the Bureau of Medical Service. That functions at our Health Department and State Medical Association offices, and you must have a bureau somewhere that carries on the detail work in correspondence.

Who shall be behind this Bureau? Who shall act as trustees? Who shall formulate plans to help care for these indigent people and make facilities better for the practice of medicine? That is the part we have gone into. We recommend that you have a Bureau of Medical Service which shall operate under a Medical Guidance Board. Who are the Medical Guidance Board? There shall be the Commissioner of Health of the State; you must have somebody in authority when you deal with the Government. There will be the Commissioner of Welfare because he is interested in the care of the people; then two doctors selected from a group recommended by the Council of the State Medical Association, two representative men of our society—let's not take them from one place, but representing the state; it is a great big state. Then those four members select one layman from the state at large; let it be a woman or man who has been outstanding and has a human feeling for the people and has made a study of it. That makes up the Bureau of the Board that sets the policy for this Medical Service Board.

How shall it function? The county functions as a health department. As you know, your county health department is composed of three doctors, one layman selected by the Fiscal Court, the county judge. That may be good, it may be bad, but is is the best we have in our form of government, and after all I believe our form of government is the best with all its defects. That makes up the Board, and add one social worker who shall find out about the status of these people in the county. That Board does the certifying and the paying for the indigent. The social worker is employed.

You shall pay for practice in the home and in the office, say 70 per cent of the ordinary charge that is made in that community.

Hospital facilities shall be used when recommended by a doctor or social worker and shall be used in the locality near unless special operations or special medical care are necessary, and then re-

fer them. Hospitals shall be paid 70 per cent of ward charge without any charge for operating room.

I have not said anything about paying the doctor in the hospital. That is a thing that would have to be gradually worked out. I think we would be on thin ice to set that now, but at least the man who does general practice and delivers women and takes care of the families should receive 70 per cent.

I want you to study that. The operating of hospitals is a very vital thing and a lot of credit goes to men all over this state who have pioneered through little rooms and little shacks and up over drug stores, trying to care for a few sick and trying to develop a hospital. They deserve a lot of credit, more than you men know who have always had good hospitals at your beckoning and who hardly know what it means to the other fellow with inadequate facilities, who has to meet the deficit each month in spite of volume. Those men have done a lot for the people of Kentucky and they have advanced medicine under adverse conditions.

We have reached the stage that we should begin to set up what would be minimum standards for a hospital, with all due consideration to where the fellow is and what his facilities are. This Board should have the power to grant and all hospitals should operate under a permit showing that they are operating a hospital that is fair to the public according to our standards of medicine.

The American College of Surgeons has minimum standards which are right. We perhaps would have to lower them some, but this Board, still trying to maintain the minimum standards of the American College of Surgeons but in circumstances existing, should set up regulations for the operation of a hospital, and that hospital should have a permit which should be put up the same as your permit to practice medicine, because they are taking a valuable position in medicine in the lives of these people.

I well remember when we used to operate a little hospital, a wooden structure, and I used to stay up there many a night for fear the thing would catch fire, and it did catch on fire and I had

an awful time trying to find that fire. Finally I tore up the floor and put a fellow under there, and it had caught under the sterilizer. I had twelve or fifteen people in there, some of them seriously ill. Think what a calamity that might have been. From that standpoint they should be safe. They should offer the ordinary facilities for care, nursing, things that are needed in a hospital in the care of the sick. There should be some standard for these hospitals. These Grade A hospitals should not all be in some center. That is not right. This Board should have the privilege of gradually working that out and putting us on standards. Gentlemen, the public recognizes that. We as a profession ought to set up some standards. The public knows the difference.

The committee also recognizes that the average boy who graduates in medicine doesn't know where to go and what to do. We as a profession and as older men, as fathers of these young boys, should set up an office in our building and have an instructor in the school for the third and fourth years in medical economics to teach them where to practice and how to practice, and he should be available to these boys. It is quite a problem with these boys. We have tried to analyze every county in Kentucky so that could be set up and kept permanent. That will be changing, gentlemen. This man should analyze Southern Indiana, part of Missouri, Tennessee, West Virginia, and he should know how to talk fatherly and intelligently to these boys and these doctors who are changing location, and he should help them.

Many civic organizations and even many communities write to me wanting a doctor. Oftentimes I don't know their facilities, and that ought to be somewhere on record so we could know what to recommend to them. We ought to guide these young men, we ought to help guide the public in finding men.

There is another thing that we have included in here, and that is the old preceptor method. I was raised under it and I believe in it. I will never forget getting up and hitching the old doctor's horse and going with him. It did me good. It will do a lot of these boys good. They need to be in touch with doctors in medicine. They are graduated now

above their intelligence, and when you get above your intelligence you are about gone. Your intelligence is just that part of you with which you can go out and be useful; it doesn't make any difference about your high scientific talk if you can't do anything. It is just like this boy shooting; if he couldn't shoot that gun it didn't amount to anything.

I want you to discuss this fully, gentlemen; I want you to recommend it if you think it is best. I want you to modify it if you think that is best.

I thank you. (Applause).

PRESIDENT GARDNER: I am sure we have all been tremendously interested in this very gripping report which Dr. Howard has just presented to us in elaboration of the recommendations. The other members of this committee are J. Duffy Hancock, Carl Norfleet, P. E. Blackerby, E. L. Henderson, W. O. Johnson, G. L. Simpson, and C. B. Crittenden. Dr. Crittenden is with the central office and did a great deal of technical work and was of tremendous assistance to Dr. Howard. If any of the other members of the committee are present and would like to speak briefly, I will call on them first.

P. S. YORK, Glasgow: This report, as I understand it, is a fact-finding document, and there is so much in the book that I wonder if it would be well for us to discuss it at this time or to refer it to another committee that you have here, the Committee on Study and Provision of Medical Care. It seems to me it would come under that head. Let the committee have hearings on it until we meet again and it cares to make a report. I couldn't intelligently discuss it at this time. As for setting up a lot of boards that I don't understand the meaning of or what powers they would have under the state, I doubt if it would be well for us to pass any resolutions at this time, so I move that the report be received and turned over to the Committee on Study and Provision of Medical Care that we may have some definite resolutions on it. The motion was seconded.

J. B. LUKINS, Louisville: It seems to me that committee ought to be combined with the Committee on Public Relations.

PRESIDENT GARDNER: I would like to say this in explanation: that the Com-

mittee on Study and Provision of Medical Care was created to cooperate with the American Medical Association last year. They made a pretty extensive study; they got fair responses in some of the counties, you know; very poor in others. It has been a question in our minds recently as to whether there was any real need of the state association continuing that committee, Dr. York, and I don't know that they have any special report to make to this convention. We have not heard the report yet because Dr. Henderson has felt that this new Committee on Medical Economics was of so much more importance that perhaps his own committee was perhaps not as urgent as it had been a year ago. In fact, some of the members of that committee, Dr. Henderson and Dr. Johnson, are now on this Committee on Medical Economics, and perhaps others. So far as taking more time to study the report, I think that portion of the motion is very well taken.

P. S. YORK: I will offer an amendment that you create a committee from the delegates to study this, if you don't have one.

PRESIDENT GARDNER: You have heard the motion. There will be discussion, and as discussion comes out I think we will be able probably to create a committee if it seems indicated. Your motion is to create a committee?

P. S. YORK: Of members of the House of Delegates, which includes the Council, too.

PRESIDENT GARDNER: I think we have no committee now of that sort. Dr. McCormack, do we have such a committee now that could take a report of this sort, other than the Council, to which it might be referred?

SECRETARY MCCORMACK: This committee is a committee of the House of Delegates, created for the particular purpose of considering this subject, and it has also been considered by the Council. I don't see where you are going to get with any further committee study on the report. It seems to me it has already been considered for a year, we have been considering it since 1912, and I don't exactly see what you are going to gain by postponing consideration.

P. S. YORK: The House of Delegates haven't considered it.

SECRETARY MCCORMACK: The House of

Delegates have been considering it since 1912 and have made a report on it every year since that time in some phase or other of this continuing study. I was on the Committee on Study and Provision of Medical Care, I am on the American Medical Association Committee, and we have made rather an elaborate report to the American Medical Association that is being continued, from the data that has been assembled, including the report that it now submitted from our Committee on Medical Economics. The report of the Committee on Medical Economics, it seems to me if you want any further study made, you would want that same Committee to study.

P. S. YORK: Are they all members of this House of Delegates at this time? You remember the personnel changes and they set up their own committees.

SECRETARY MCCORMACK: They do set up their own committees. No, they are not all members. All the members of no committees except the reference committees are members of the House of Delegates. All the permanent committees are appointed from the entire body of the Association. It would have cost the state association somewhere in the neighborhood of \$15,000 to have made this study. It cost \$2,000 to publish this report. Of course the State Health Department had nothing to do with the formulation of the report at all; it has been done through the members of this House or practicing physicians.

PRESIDENT GARDNER: My purpose is that we don't get too far out of order in creating new committees which might be unnecessary. My desire in appointing this Committee on Medical Economics, as I said in my own report, was to reappoint committees as much as possible, and this committee is a reappointment of a committee of last year that has been studying medical economics for several years. Dr. McCarty resigned from that committee and I just added one new member, Dr. Hancock, so it is the same committee that has been in existence; the Chairman has been changed, of course, because Dr. McCarty dropped out. Any standing committee studying a problem like this, it seems to me, has to be a continuing committee. They are members of the society. Our Delegates are changing from year to year. We couldn't ap-

point a new committee each year if our Delegates are changed. A standing committee is a committee that should make a continuing study. I want this afternoon all sorts of discussion as to whether or not this report should be adopted, should be modified, should be rejected. Dr. Howard hopes you won't pigeonhole it, but let's have discussion of it pro and con and then if this committee isn't competent to be continued the question of creating another committee might be taken up. We don't have to decide this afternoon.

P. S. YORK, Glasgow: To make myself clear, in the discussion and the recommendations it seems to me there are legal aspects, there are public relations aspects there are several things that must be taken into consideration. At the present time we don't have that information. For us just to go on an "aye" and "no" vote and give it publicity all over the state would not reflect the true opinion of the doctors of the state, and my purpose is that a committee be appointed here to take the report of this fact-finding committee and draw up some definite recommendations, either take the ones already drawn up or make others, have a hearing, and do it as we do in the State Legislature or in Congress, or anywhere else.

PRESIDENT GARDNER: Do you mean to report at this meeting?

P. S. YORK: They can report at this session, yes. At this session is what I am talking about it; either pigeonhole it, adopt it, or refuse it. We have got to have something definite to go on.

U. G. BRUMMETT, Middlesboro: It seems to me that you have covered the question very thoroughly. For this group now to refer this to another committee for study looks to me like an effort to sidestep the whole situation. I see no reason why the facts cannot be brought out now in discussing this report, just as it is. I believe by discussing the report the facts will be brought out that will help everyone to understand what is being attempted.

PRESIDENT GARDNER: Let's have some discussion here and handle this as intelligently as we possibly can. I don't know whether we want to adopt this report or not. It sounds reasonable to me, but I am not sure that the House of Delegates

wants to adopt it, but let's find out and discuss it.

JAMES STITES, Louisville: These recommendations have only been before the profession for the last few days. We appreciate the splendid work this committee has done, but I don't believe this House of Delegates knows sufficient about these resolutions, or the medical profession as a whole does, to take any definite action at the present time on this. There are a good many things about these resolutions which are commendable. There are also a good many things which are questionable. I don't believe at the present time the House of Delegates is in any position to act on this issue, and I think Dr. York's suggestion of a committee is an excellent one. I would like to make a motion, since this action is going to come during the following year, that a committee of which Dr. Scott, the President-Elect, be Chairman and four delegates from the House of Delegates be elected to study these resolutions and report back at a later date.

PRESIDENT GARDNER: Do you make a motion?

JAMES STITES: I make that in the form of a motion.

PRESIDENT GARDNER: Dr. York, you amended your motion. I am going to give precedence to you if you have another motion.

P. S. YORK: I will withdraw my motion in favor of Dr. Stites' motion.

JAMES STITES: I moved that a new committee with Dr. Scott, President-Elect, as Chairman and four members of the House of Delegates be elected to act with him to study these resolutions and report.

PRESIDENT GARDNER: Four delegates members of this House of Delegates be elected?

JAMES STITES: Yes, elected or appointed by the Chairman, it doesn't make any difference.

PRESIDENT GARDNER: It has to be one or the other.

JAMES STITES: Appointed by the Chairman.

PRESIDENT GARDNER: Instead of continuing this committee? You wouldn't favor, I assume, continuation of this committee?

JAMES STITES: That is right.

The motion was seconded by Dr. York.

PRESIDENT GARDNER: We will discuss that motion, which takes precedence over the discussion of the report.

JOHN W. SCOTT, Lexington: Since I am named in this motion I think it is only fair for me to express some opinion about it. I can see exactly Drs. York's and Stites' point of view; barring the propriety of my being injected into it I can see the position and the feeling of both of these gentlemen. It seems to me a good compromise would be to discuss this thing on its merits. At the end of that discussion let Dr. Stites perhaps withdraw his motion for the present, at least, and if the discussion brings out to him and to all of you the need for another committee to pass on the action of this committee, then I think it would be quite a proper thing to do, but it seems to me that this matter certainly ought to be discussed on its merits now. I would suggest, especially as I am named as Chairman of this projected committee, that this motion not interfere at least with the discussion of this report on its merits, which I think we ought to have right now.

As far as the need for immediate action on this report is concerned, I think that is not such an urgent thing. All of this action is taken in anticipation of large sums of money to be expended. Those sums, thank God, have not become available yet. When they do, then we will need to make some provision for expending them.

I think certainly the discussion should proceed.

PRESIDENT GARDNER: Thank you, Doctor, for supporting my position. I was particularly anxious to have a discussion of this report before we confused the issue by appointing a new committee, but Dr. Stites' motion is still before the House and has been seconded. Will somebody else speak before Dr. Stites' motion is put to a vote?

JAMES STITES, Louisville: Mr. Chairman, I would be perfectly willing to withdraw my motion in favor of discussion, with the privilege of restating it later.

PRESIDENT GARDNER: Discussion on the report will continue.

WALTER I. HUME, Louisville: I had not thought to have anything to say about this report. We have a very splendid committee, every one of whom its a per-

sonal friend of mine. I doubt if there is any need to have another committee. However, the recommendations of this committee took a tremendous leap forward in some directions, and I for one can say that I am not in a position to vote intelligently on the thing. It includes too much; there are many ramifications I am not sure about. I think the other members from Jefferson County feel the same way. We don't know enough about it to vote on it. How are we going to represent our constituents at home? I think that further study is what we need on this. We certainly don't want to push anything over on the doctors at home. If the doctors want it we want it, and that is all right. I am for anything that this Association and its membership want, but this is a tremendous thing, a tremendously important thing, and we don't exactly know how we should vote on the matter if it comes up for adoption. I think publicity is what we want, and we would like to get it back to our doctors at home and find out what they want to do about it before we are asked to vote.

PRESIDENT GARDNER: Is there further discussion? If you have opinions about it, let's hear them. Dr. York, would you like to talk about it? You have already expressed the opinion that you should have more time. Is that all you care to say?

P. S. YORK, Glasgow: Mr. President, my point is this: that these far-reaching resolutions should be presented to our county societies, discussed there, delegates elected, and this thing done in an orderly way. I am like the gentlemen who have expressed themselves: I haven't seen a copy of these resolutions before. I have looked at some of the statistical data in the book, but as far as these resolutions are concerned I haven't had a chance to see them.

PRESIDENT GARDNER: They were in the book.

P. S. YORK: Well, I didn't read them, and I couldn't commit the eighteen doctors in Barren County to a program of that kind until I have had an opportunity to discuss it with them. In other words, I am not voting my personal opinion on it; it is a matter of my constituency that I am interested in and what they want.

H. H. HAGAN, Louisville: It seems to

me that the real point at issue is that most of us want more information. We agree that an acceptable program should be initiated by this society for the care of indigents in particular. Now we would like to know where the committee proposes to get the funds. Are they to come primarily from the counties and the state, or are they to come primarily from federal aid? Just how is this proposal to be carried out in detail? Just what detail bill is to be introduced into the Legislature? If some of these suggestions such as increasing the county personnel are to be incorporated, it probably would not meet with acceptance by the Legislature. To what extent has the University of Louisville agreed to the acceptance of an instructor that we may send for medical economics, or to what extent have they agreed to accept the preceptor system?

There are a lot of those things that we would like to have clarified by this committee.

U. G. BRUMMETT, Middlesboro: I do not happen to be a member of this committee, but I do know something of the work that this committee has done, and when I see the possibility that this work this committee has already done will be just passed over and referred to another committee for study, it is very evident to me that we have not gotten very far in the problem. The situation is much more acute than some of us realize at first thought. About 35 per cent of our public lies in the rural districts, and I think in the rural districts in particular is where we are having the most difficulty. After a period of study and activity of twenty years in the hospital business myself, I believe we should have some type of hospital standardization. I believe definitely that we should have minimum standards created in order to offer hospital service to the public, because the public is deluded and feels safe in entering any building placarded "Hospital." I, for one, am very anxious to see hospital standardization in the State of Kentucky, and if I can't meet it then it is up to me to get out of the way and let this newer and younger and more efficient blood come forth and meet the standards for hospitalization. In the interest of the public we should do it; in the interest of the profession we should do it.

I am going to tell just one little story

that will illustrate my point. News came to me this morning that a certain man was at the point of death. A consultant whom I know quite well, a Harvard graduate, was called to see this patient with another doctor. The hospital that had this patient had a patient who probably had typhoid or undulant fever. He was lying there in a state of coma. There had been no laboratory work done whatever for the patient. There was no report from the laboratory. He was dehydrated almost to a point of death and had not had one bit of transfusion. In fact, the consultant urged that transfusions be given, and finally they found 20 cc. of dextrose and injected that intravenously, adding fuel to fire. Then it was found at last that there had not been even a urine report run on that man. That is a fine young man in my county and he lies at the point of death. Does this society owe nothing to the public? Does it owe nothing whatever to standardized hospitals? I want you gentlemen to think that question over. That was the point that the Doctor raised that made me realize this society ought to take some action, at least have some discussion. Let's understand what it is all about, and certainly we owe it to the public to do something about such conditions.

PRESIDENT GARDNER: I imagine there is one recommendation in here that is causing some anxiety. That is this Medical Guidance Board. Let's hear somebody talk about that. Is there objection to the Medical Guidance Board?

C. C. TURNER, Glasgow: It seems to me that the subject is confused. I don't believe anybody in this House of Delegates objects to the factual findings of this committee. The objections are to the recommendations, and they perhaps are not objections at all if the recommendations are clarified. If I see what this House of Delegates is confused about, it is the fact that they don't quite understand the recommendations. Nobody could object to the fact that there are 28,000 people in Barren County and that some of them are on relief but most of them are not. These facts go on. Nobody could object that we have a hospital and some have not. It is a wonderful report, I think. If you clarify the recommendations I believe they will be in a position either to vote for or against.

P. S. YORK: Let them take the report and introduce something for us to vote

on instead of just an idea. We can't vote on ideas; we have got to have something definite.

C. C. TURNER: There is another thing you will find in any kind of a House, and that is that men object to a railroading proposition. If this thing is worth anything at all it is worth a bit of delay, it is worth further study, it is worth clarification. That is all they want. They just simply want a committee and a little more time. If there were a copy of these recommendations in the hands of every one of these delegates this thing could be settled in just a few minutes. I know they don't understand these recommendations.

I make a motion that Dr. Stites made a while ago, that Dr. Scott appoint four members of this House, not the Council, right here and let them study it and report back at a future meeting of the House of Delegates for action.

ERNEST BRADLEY, Lexington: You didn't mean Dr. Scott to appoint them, did you?

PRESIDENT GARDNER: He means the President-Elect because it would come under his administration.

C. C. TURNER, Glasgow: It would come under him.

W. B. ATKINSON, Campbellsville: There is one bad feature to this motion. Exactly one year from now when this new committee reports the House of Delegates will be in exactly the same position that this House of Delegates is now.

C. C. TURNER: Beg your pardon, Doctor, they are to report now, at this meeting, not a year from now.

PRESIDENT GARDNER: In other words, it would be a special reference committee.

C. C. TURNER: That is right.

W. B. ATKINSON: You will find that this report is so complete and is so mixed up that no two people or five people can study it out in five days, or in ten days. The thing to do is to do as we did in the Sixth and Seventh Districts before the meeting of these two Councilor Districts. The thing was discussed by Dr. Howard. It should be discussed before each of the county medical societies probably before action is taken, because most of us are perhaps a little prejudiced on this. You will find that factual mistakes have been made. That thing might work against it. Some of the things that have been recommended have already been ac-

complished last year by the appointment of a medical supervisor, or whatever Dr. Floyd is. This thing should be discussed by the individual county societies if you expect to get anywhere, because if you get another committee we won't know anything more about it than we do now.

JOHN W. SCOTT, Lexington: You want to hear them talk about the report, don't you?

SECRETARY MCCORMACK: If you will permit me, I think I can clarify a lot of the discussion. I have been very much interested in it because of course I am interested in everything about which you all are thinking. The report of this committee is in accordance with the request we received from the American Medical Association and is being carried out in most of the states. They were written out on blanks and sent out by the American Medical Association, requiring the sort of statistical replies for which most of us were not prepared, and the members of our committee on needs and provision of medical care realized that our fact findings from that report were vague and we needed further data. This study is continuing in all the states. We always have been slow in Kentucky. I am glad we are. We are conservative because it behooves poor people to be conservative, and we are sixth in the poorest of the states. It is very important for us to keep that in mind. It is very difficult for those of us who live in Louisville or Lexington or Owensboro or Henderson, the cities of the first and second class, which have a good many more than half the doctors and more than half of all the facilities and more than half the wealth to realize the difficulties that confront the rest of the state.

I would like you to think of it historically for a moment. The first law that was passed by the General Assembly of Kentucky under its first constitution in 1792 was a bill requiring the Fiscal Courts of the state, the county courts of the state they called them then, to supply and pay for medical services for those of their people who were unable to make such payment themselves. That law modified is the statute today and has been ever since that day. It has been decided time after time by the Court of Appeals of Kentucky that that is the law and that is one of the essential constitutional

payments that must be made by the county before any other payment is made.

That sounds awfully good, but any of you who have practiced in any county in the state (I did for a long time) and have presented your bills to any of the Fiscal Courts know exactly the results; you don't get that payment. All you do is get a glad-hand because the Fiscal Courts haven't the money. A few of them like Warren and the counties on the rim around Eastern Kentucky and in the Blue Grass region, and Jefferson and Henderson and McCracken and Daviess are able to pay their bills; the rest of them can't do it and there isn't any use discussing it.

The older ones of you will remember that when this matter came up for discussion, a special session of the House of Delegates was called at Lexington in 1912 for the purpose of discussing this very matter. Dr. Frank Billings came down as a member of the Board of Trustees from Chicago to discuss it, but it was proposed at that time that another medical school should be instituted and it was thought that was the remedy for the problem, because in that way we would get a larger number of physicians, but after full discussion it was decided it wasn't, and from time to time since then we have been discussing this problem at every session of this House of Delegates. It has each year had a report from a Committee on Medical Economics, a Committee on Public Relations, or from its Council or some special committee that has been considering this problem. I know you will understand because you know better than anybody else how difficult it is to get such matters as this considered by the whole group of us in a democracy whose ideal is that every individual in it should know every single thing proposed and have every fact presented and all should join in making a decision, but we have never lived in a democracy of that type in the United States; we have always had a representative form of government, and for that reason we have proceeded both in the American Medical Association and in all of the constituent associations in the United States by the plan of having this annual meeting of the House of Delegates, at which the reports of committees that have worked throughout the year are brought in for consideration and

discussion. In the House of Delegates of the American Medical Association they promote the profoundest discussions, and yet when we get through with the discussions, as a rule they are adopted by a unanimous vote because work has been done by the committee that is really worth while. They do just exactly the same thing that you and I would do if we were delegated with the same authority that the members of these committees are delegated. They conduct an active study for a year. I never saw their report until I heard it read at the Mammoth Cave meeting a few weeks ago. The members of the Council heard it. It was brought before us and fully discussed for probably six hours before we arrived at a decision on it. Some changes were made in it by the committee during that day.

This is the important thing for you to realize in the formulation of principles. In so far as your State Health Department in Kentucky is concerned, it has never under any circumstances for one single moment violated the law which prohibits it or the county health department from practicing medicine for remuneration, and whenever a health officer has practiced medicine and received compensation for it he has immediately been removed, and any other practice of medicine is approved by his county medical society or he doesn't do it. The things that are done in the practice of preventive medicine are only done by our health department when they have been approved by the county medical society as the easiest and most economical and most effective way to serve the public. It is important for you to get that straight.

In regard to this question of medical care, I want you to understand that your State Health Department acts under your direction, because no procedure has ever been adopted without preceding instructions from this Association. The first instructions we have ever gotten with regard to the practice of medicine, except in the establishment of pre-natal conferences and clinics, all of the action that has been taken in regard to venereal clinics, in regard to obstetrical conferences and in regard to well baby clinics, have been taken under your instructions. Last year you instructed us to hold cancer clinics. Now we are not prepared to do that; we haven't the money with which

to do it and we haven't the personnel. The question of medical care was never considered by the State Health Department because it is not a function of the State Health Department under the laws of Kentucky, and it was never considered by the State Health Department until it was considered after the approval of the plan for medical care for the indigent, to be paid for from local tax money, and instructions were given from the House of Delegates of the American Medical Association at a special session last year, and you approved those instructions and instructed the Council to proceed to make plans under it. They have done that.

Get this in your minds and I think you will have the whole thought. I don't know the thought of the committee, but I think you will have the thought that is behind the action of this committee because it is the only thing that could activate such effort. Under the law today in Kentucky the counties of the state are responsible for medical care for the indigent. Under the laws of Kentucky the Kentucky State Medical Association has charge of every medical and public health activity in the State of Kentucky. It is the only responsible body; it is the only body that is clothed with any authority, and we want to continue to have the legislature and the people of the state repose that confidence in us.

These resolutions that were passed originally at the special session and were reaffirmed at the recent session with certain very important modifications and reservations, which are quite as valuable and quite as important and we approve them quite as heartily, I am sure, as the profession as a whole did the original resolutions. I don't think there is anybody in the State of Kentucky, certainly I have heard of no one, who favors the present text of the Wagner Bill as effectuating in any way the National Health Program. I don't know in Kentucky a single physician, I haven't heard of a single layman of any importance, who favors that legislation.

Under whatever legislation is passed by Congress, there is no question that funds will be given (if the American Medical Association's leadership is respected) to the states, not in large sums, but the states that show need for medical care, and show need for additional hospitals, that show need for additions to existing hospitals, will get funds. That

is the American Medical Association's program.

If that is going to be done, it is going to be effectuated and carried out by a legal agency in each state, and the only legal agency that can do that in each state in the United States is its health department. The Health Department in Kentucky and the Kentucky State Medical Association are one and the same thing.

The report of this committee by all means should be studied to whatever extent you desire to study it, I think it should be examined by as many of you as desire to examine it, but I really believe that if you will read it through you will find that you will want possibly to make modifications in it but you will be just as ready and will know just as much about what to do because you are all in the habit of being called in emergency cases and making decisions now, and you can decide what you are going to do about it in the next day or two just as readily as you can at any time.

The recommendation of this Medical Advisory Board seems to be in accordance with Kentucky precedents. The Commissioner of Health is Chairman. Under our health organization we have always had three physicians and a county judge and a lay member elected by the Fiscal Court as the county board of health. That has left the control of public health matters in the hands of the practicing physicians in the state, in every county of the state.

JOHN W. SCOTT, Lexington: Who appoints those three physicians?

SECRETARY MCCORMACK: The State Board of Health, and they are appointed on the recommendation of the Referee in the county and in a third of the counties in the state all three of the doctors in the county who are not railroad surgeons are appointed on the board, and it doesn't make any difference who they are, because they are really the county society. The medical members of the Board of Health are really the representatives of the county medical society acting as provided by law under our system and plan of government. That is beautifully exemplified in Fayette County, where the best plan in the United States, I think, has been put into operation.

In this Medical Advisory Board it provides, just as is provided under our old plan (and this is an evolution from that

evidently in the minds of the committee) that the committee that is selected by the board of health that is selected by this Association shall be: The Commissioner of Health chairman of the committee, the Commissioner of Welfare, who is at the head of the social workers of the state to determine who is indigent and who is not indigent under the law, two medical members selected by the State Board of Health (that keeps out politics) a list of nominees by the Council of the State Medical Association, these two physicians engaged in the practice of medicine.

JOHN W. SCOTT, Lexington: Who selects them?

SECRETARY MCCORMACK: The State Board of Health. They are nominated by the Council and selected from nominees that the Council makes. The Council nominates two or more for each vacancy, and from those nominations the members of the board of health select them so they will be sure to get them from different parts of the state. Then those four members when they assemble select a fifth member who shall be a layman. They may select a lawyer or a banker or any type of man they want. That is the Advisory Board. It is proposed that an Advisory Board of that type be created for the purpose of handling the policies for the public expenditures, for the expenditure of any public money appropriated by the state, and that such an Advisory Board will help to develop plans similar to those in Fayette County or Mercer County or in Jefferson County that will be acceptable to the profession of the county and to the fiscal authorities who are going to pay out money.

The American Medical Association, years before any of this matter came up, insisted and insisted that the medical care of the indigent was a public charge and ought to be by public taxation, but their insistence and our insistence is that that shall be handled and managed locally. This provides for that local management, through local boards, with the general supervisory authority of an Advisory Board of this type. Whether that is the best type or not I am the last man in the world to say, because, I, like you, am involved, but I am not interested in the machinery except that I want it to be made effective, I want it to be done so that something will result from it, I

want to see something happen when we do it.

We can feel as satisfied as we will with things as they are, but things never are going to stay as they are, and in the progress of time the people of this country are going to insist and demand that they shall receive for all of them as good medical care as can be made available in their different localities. That is a thing that is sure to come; it doesn't make any difference at all whether it comes next year or ten years from now, it is as sure to come as we sit here. For us to say that it is not coming just puts us, in my mind, in the position of the unwise virgin. It is going to come, and the thing that we want to do is to see that the profession has its lamp oiled and burning, is ready to deliver the goods and to do a good medical service, not for the patients only who have come to us heretofore, but for all the patients who will come to us who are not now able to come, and we know there are many who are not now able to come.

It is merely to set up the machinery to consider plans for such a consummation that the committee has made its report. The details of the report, the statistics of the report, have been taken from public documents, have been taken from public records; there may be some misprints in it, but I would be willing to make a wager that those statistical experts who have gotten up the statistical part of it and who haven't the slightest idea on the living earth what it is about and don't know what is going to happen as a result, have set down in factual form figures furnished by the Census Department and every department of the government that has to do with it. Of course they are to be corrected because it has been published recently, but it is merely a continuation of work that has been going on over all these years, and it is an attempt to arrive at the next step. That is all there is to it. It is not going to make any change, it is not going to add one single, solitary particle of succor or aid to anybody who wants to regiment the medical profession or bring about socialized medicine or to do any of the things that we have gotten rather alarmed about it and that I would be alarmed about if I thought there was the slightest danger of their consummation. I know that in Kentucky we are not go-

ing to socialize anything or regiment anything if it costs very much money and we have to pay it, because we haven't got the money.

I testified before the committee that our interest in Kentucky in the proposed Wagner Bill was largely academic, that we were opposed to it in principle, that we were opposed to it in fact, but our attitude toward it was largely academic because we wouldn't be able under any conceivable circumstances to take advantage of its so-called benefits if they were to be made as a national policy because Kentucky couldn't possibly put up the money to defray the cost.

EDWARD WILSON, Pineville: I believe the more we discuss this thing the more we get this House of Delegates confused. I believe everybody pretty well understood what the proposition was before so much discussion began. It is a question of hospital standards and it is a question of taking care of the indigent. It is very plain to me that we should have an Advisory Board to superintend the minimum requirements of a standard hospital, and I believe that Dr. C. C. Howard has studied this more than any of the rest of us and he should read his recommendations and accept them.

I. T. FUGATE, Louisville: This report came to our desks not earlier than Friday. How many of us have read it? The first thing I want to see is the population of the counties. Here is a review of some 200 or 250 pages. Dr. Howard, who has evidently done a great deal of work, is to be commended, and everyone on his committee is to be commended. At the same time he admits in reviewing his report that there are many things that are not understood in this thing. You may call it socialization or adhering to the Wagner Act or what-not, but it seems to me that the gist of this thing is coming right back to the Wagner Act 100 per cent and you are recommending practically exactly what the Wagner Act recommended.

The American Medical Association to a great extent has gone on record as opposing this. I think that the greater number of the physicians are on record as opposing this. It would seem to me that before any final decision is made upon this thing, a study by which everyone could acquaint himself intelligently should be made.

J. H. PRITCHETT, Louisville: We are getting nowhere and getting there fast. I think everyone here recognizes the tremendous amount of work this committee has done. For that reason I see no point in securing another committee. It seems to me the much better procedure would be to refer this to each county society for their action, because they are a part of this State Association, as are you and I, for their immediate action, unless the money be forthcoming at once, in which case there would be an emergency. It won't be forthcoming at once. I therefore would make a motion that this be referred to the component county societies for their action.

PRESIDENT GARDNER: Is that a substitute motion for the one on the floor?

J. H. PRITCHETT: That is right.

PRESIDENT GARDNER: Did Dr. Turner's motion have a second? (Not seconded.) Does Dr. Pritchett's motion have a second?

P. S. YORK: I will second Dr. Pritchett's motion.

JAMES A. ORR, Paris: I rise to a point of order. There is no report of the Committee on Medical Economics before the House. Dr. Howard made a very able address in regard to this report and never submitted any report. He referred to this book, but he never put in this book as his report, or any one page in this book, or all of it. There is no report before the House.

PRESIDENT GARDNER: Dr. Howard, you can make a motion that it be adopted, but if you want that to go in formally you should read the whole report.

SECRETARY MCCORMACK: Before 'Dr. Howard says anything, I would like to make a motion. I would like to move that we recess until seven o'clock tonight and we will have time to discuss it tonight.

C. C. HOWARD, Glasgow: I have to go home.

SECRETARY MCCORMACK: I withdraw the motion.

C. C. HOWARD: This report was mailed to every doctor in Kentucky. This is the report that we are bringing back to the House of Delegates. It is for you to consider and do as you think best. This committee has done the best it could to try to find the facts in this case. This committee only recommended the care for the people; it never said anything about the Wagner Bill and it hadn't

thought of the Wagner Bill. There will be sometime in the future some federal act to replace the objectionable Wagner Act, and any man who is informed knows that is true. If Kentucky conforms to it we will have to set up some way of doing it. Let's not get all worked up about socialized medicine. I tried to make that plain. The Wagner Bill never was considered by us; it is dead.

J. A. ORR: I rise to a point of order. A motion to adjourn is before the House.

PRESIDENT GARDNER: It was withdrawn.

C. C. HOWARD: Do you want to adjourn, Doctor?

J. A. ORR: Yes.

C. C. HOWARD: Go ahead, then. All in the world we said was that we recommended some way of providing hospitals and facilities for the practice of medicine and taking care of the indigent. I come back to the same thing I said. Do you think the facilities all over Kentucky are as good as they should be for the practice of medicine? Do you think they could be improved? Do you think that you might need pay for some indigent that you are not paid for? Do you think you have borne it long enough or that you should continue to carry it all? Do you think that medicine should not change and will not change? Do you think, as I said, that the roads didn't change, or anything else? I am just coming down to the facts. We only recommended an Advisory Board, a board that would try to help set this up. It is composed mostly of doctors. If you want to object to that, all right. If you want a substitute for that, all right. I told you there was a lot of work in this. Dr. Crittenden and all his staff and everybody worked for nothing. We tried to assemble the facts. If you are going to pick out all the little errors and things that I could pick out too in this, and criticize them, all right, you can do it, there are plenty of things to criticize. I can pick lots of criticism on almost any case you present, if I want to be critical, or I can see the fine spirit, that you did the best you could, and I may want to amend it, but when the discussion is over I am willing to accept it as amended.

Have you tried to analyze this and work at this for months and months and days and days, with no money or any-

thing? Have you gotten in your car and driven over this state and gone to Louisville and run backward and forward and worked at it for nothing for this society? I have spent my life in this society, and you have honored me by making me the President of it, and every member of this committee was as honest as he could be about this; so were the Council. We didn't try to put anything over, we didn't want to railroad anything. This committee has spent day after day of hard work on this report. We have written to or consulted with more than 2,500 Kentucky physicians in securing this data. I told you to consider it, to substitute something, to do anything you wanted about it, but you have come up to the river now. How are you going to cross it? There is nothing in this that is socialized medicine. All I have talked about is how to care for the indigent. Would you set up better facilities? Would you have laboratories in counties that don't have any? I have only talked about common, good, everyday things, gentlemen. Don't get all confused here. If you have a better substitute for this, rise up and tell us; we would be glad to see a Moses. I have spent my time; this committee has spent its time. I repeat I rode all over the state, I have talked to civic organizations, I have done everything I could. We have boiled it down and done the best we could. You reject it or accept it, do as you like; modify it. I won't fall out with you, I will fall in line. I know how to make a good soldier; I'll do it.

PRESIDENT GARDNER: Would you make a motion to get it before the House?

C. C. HOWARD: I will make a motion that this entire report that we are submitting to this House of Delegates be adopted.

SECRETARY MCCORMACK: Let me call your attention to the fact that the recommendations are on pages 28 and 29.

C. C. HOWARD: We mailed a copy to every man in the state.

SECRETARY MCCORMACK: The report itself is on pages 28 and 29 and covers one page.

PRESIDENT GARDNER: I think the Secretary had better read the recommendations before we adjourn.

SECRETARY MCCORMACK: (Reading) This Committee, in view of the fact that the Council of the State Medical Association has already recommended a Bureau of Medical Service, which acts

jointly with the State Medical Association and the State Department of Health, recommends that the work of this Bureau be continued, and further, that its activities be extended to meet medical needs which may arise in the future.

This Committee further recommends that all grants-in-aid of money for hospitals and medical service, which may be received now or in the future, be disbursed through the State Board of Health and administered by the Bureau of Medical Service. The Bureau of Medical Service shall operate under a Medical Guidance Board, appointed by the State Board of Health, and shall consist of the State Commissioner of Health, the State Commissioner of Welfare, two members selected from a list of two or more members of the State Medical Association, submitted by the Council of the State Medical Association, and one member from the state at large, the latter member to be chosen by the four heretofore named. This Bureau shall be charged with the sole responsibility for the operation of any plan designed to secure adequate medical care for the indigent citizens of the State. The patient shall have free selection of his physician, who must be within his locality. All funds, state, federal and local, shall be dispensed through this Bureau or its authorized representatives.

In each county or group of counties a public health and clinical laboratory shall be established and placed under the immediate direction of the county health department, or where there is no health department, under the direction of the county medical society. Each county shall have at least one qualified clerk charged with the responsibility for keeping records and making analyses of reports. Each county health department shall be adequately staffed and should include in its personnel one or more nurses especially trained in maternity service, the number of such nurses to be determined by population and number of births.

Each county shall have one or more trained social workers under the direction of and reporting to the county health board. (That recommendation was unanimously adopted by the House of Delegates last year, and the University of Kentucky was requested to establish a school for the training of public health workers, and after consultation between the Council and the University of Ken-

tucky it was decided that that school should be established at the University of Louisville, and it is now under way.) This board, through the social worker, shall determine who is eligible for free medical care. Fees shall be held to a minimum and only paid for practice in the home and office at 70% of the ordinary call of physicians in the community.

All indigent patients admitted to hospitals shall be investigated by social workers and the county board. Hospitals shall be paid 70% of ward charge (without operating room fees). Hospitals used must be the nearest available, unless special conditions demand other hospitalization. All charges, both medical and hospital, shall be certified to the county health board and paid through it monthly.

All hospitals in which public funds are used as grants-in-aid shall be subject to the approval of this Bureau or its authorized representatives. All hospitals shall conform to the minimum standards of the American College of Surgeons or regulations set forth by the State Medical Service Bureau. Permits shall be obtained for operating all hospitals. Patients everywhere in the state should have a hospital readily accessible to them.

This committee takes cognizance of the fact that hospital facilities for the care of the tuberculous in Kentucky are wholly inadequate and strongly recommends that additional facilities by districts be made available as rapidly as possible.

This committee realizes that medical school graduates now have only a small conception of medical economics. It is, therefore, strongly recommended that medical economics be taught in the third and fourth years at the University of Louisville, School of Medicine, by an instructor sponsored by the State Medical Association. (That recommendation was also made last year, and your Committee on Medical Education has a letter from Dr. Moore saying such a course has been inaugurated and is now in process, and he asks for further assistance from the Association.) This instructor shall have an office in the State Medical Association building and shall be available for consultation to physicians, medical students, and other interested persons seeking information relating to medical economics.

This Committee recommends that the

Preceptor Method of teaching medicine be added to the present training of fourth year medical students.

PRESIDENT GARDNER: Let's get a second to Dr. Howard's motion. He moved the adoption of this.

The motion was regularly seconded.

PRESIDENT GARDNER: The discussion will be continued, and Dr. Orr's point of order is well founded, that all other motions are out of order because they were contingent upon this motion which had never been properly presented, so the motion now is before the House for further discussion at our next meeting.

A motion to adjourn was regularly made, seconded and carried, and the meeting recessed at 5:45 P.M. until 7:00 P.M. the same day.

MONDAY EVENING SESSION

September 11, 1939

The second session of the House of Delegates of the Kentucky State Medical Association convened at 7:20 P. M., J. Duffy, Hancock, Louisville, Vice-President, presiding.

PRESIDENT HANCOCK: Dr. Gardner will be here a little later and asked me to preside until he comes. We will have the roll call.

The Secretary called the roll.

SECRETARY MCCORMACK: Mr. Chairman, a quorum is present.

PRESIDENT HANCOCK: We will proceed with the reading of the minutes.

PAUL S. YORK, Glasgow: I move the reading of the minutes be dispensed with. The motion was seconded and carried.

PRESIDENT HANCOCK: When we adjourned there was a motion before the House by Dr. Howard that the report of the Committee on Medical Economics be accepted and approved as read.

SECRETARY MCCORMACK: Mr. Chairman, after consultation with a number of members of the House I want to make a motion that I think will arrive at a settlement of this question and leave us so we are in the right position. I talked to a great many of the members of the House who took part in the discussion and a number of those who did not take part in the discussion this afternoon. Everybody is deeply appreciative of the monumental labor that has gone into the preparation of this report. Most of the members feel that the recommendations should be digested for a little longer time before final action is taken. I want to move as an amendment to Dr. Howard's

motion that the report of the committee be adopted with the exception of the recommendations on pages 28 and 29, and that the committee be instructed to continue its study of factual data in regard to medical economics in Kentucky. I would like to ask Dr. Howard to accept that amendment.

The amendment was seconded by Walter I. Hume, Louisville.

PRESIDENT HANCOCK: Are you ready to discuss the amendment as outlined by Dr. McCormack to Dr. Howard's motion?

C. C. HOWARD, Glasgow: I accept the motion, and I want to state again the resolutions and recommendations were only what Jefferson County and Fayette County are carrying out today, and I am surprised that the objection to this came out of Jefferson County. I only said that the facilities are not adequate for the two and a half million people in Kentucky. I can't understand how the men who come from Jefferson County and Fayette County who pay for the indigent and do everything that we ask for are the ones who raised the objections. I would hate to have that carried back to these people who are tubercular and sick, that you fellows that have that care objected to the other fellow having it when the funds are available. Fayette operates under it, and why they should say that Owsley County, Barren County, Bullitt County, Christian, and all the rest shouldn't have any of those facilities I can't understand. You will have to explain that yourselves to the people.

SECRETARY MCCORMACK: Dr. Howard, if you will permit me, I want to explain for my confreres up there in Louisville, I have listened to their conversation since we adjourned this afternoon and they haven't that attitude.

C. C. HOWARD: They have gone on record that way.

SECRETARY MCCORMACK: They haven't that attitude at all. The attitude they have is this: that this matter, this prescription, you might call it, hasn't been sufficiently considered to arrive at a definite conclusion about it and that the factual data is so valuable and makes a remedy so evident that we must determine it, but they want to have a little more time to determine just exactly the treatment of the patient. You have finished your diagnosis, you have finished your

clinical procedure and laboratory procedure, and now they want the consultation to continue for a little longer time before the treatment is instituted.

C. C. HOWARD: While the patient dies.

JAMES A. ORR, Paris: I would like to rise to a question of personal privilege. I made some statements about this thing this afternoon. I never made any objections to anything that Dr. Howard said and I never heard any objections from anybody. The only objection that was made on this floor this afternoon was that you had a whole book full of things here that were brought to us and they wanted to ram it down our throats and nobody had read it. That is all we want to do—read the thing. We are all in agreement about the necessity of this thing. I don't think Dr. Howard is any more in favor of furnishing facilities for these communities that need it than any other member. I think we are all in agreement on that point. He is mistaken about that. I got a copy of this in Saturday morning's mail. I haven't had a chance to read it, and neither has anybody else. I think this thing is of such momentous import that it ought to be allowed at least to be looked at by the Delegates before they vote on it. I would like to suggest that this thing lay over until the end of the session and don't vote on it now. The men who made the motions this afternoon are not here now.

PRESIDENT HANCOCK: Are you ready for the amendment?

SECRETARY MCCORMACK: The amendment is that the report with the exception of the recommendations be approved, that is the factual report with the exception of the recommendations on pages 28 and 29, and that the committee be continued.

PRESIDENT HANCOCK: Are you ready for the question?

The question was called for, the motion was put to a vote and the amendment was carried.

PRESIDENT HANCOCK: We will now vote on the amended motion. All in favor of the motion as now amended signify by saying "aye," opposed "no." The amended motion is carried and that disposes of the report of the Committee on Medical Economics.

The next report is that of the Medico-Legal Committee, J. B. Lukins, Chairman.

J. B. LUKINS, Louisville: Since my last report to this society, the medical defense committee has had a fairly busy year. There have been seventeen new cases filed. There have been four cases dismissed by order of the court. There have been seven cases settled out of court. Most of these were for nominal amounts and were handled altogether by the insurance companies. It is worthy of note that the only case in this series in which there was a financial settlement of any size was a case that was never reported to the medical defense committee. This was a case, I think, in which a needle was broken off in the spine in giving spinal anaesthesia. Just how much legal responsibility, if any, there was in this case our committee had no opportunity of ascertaining.

Something new developed this year in the State of Kentucky. A boy far back in the mountains had a general septic infection following a localized sore on the upper lip. This was well treated by a competent and worthy physician at a mission school in the mountains and later was sent to a Lexington hospital. The doctor who first treated the case and who rode fifteen miles on horseback and made every sacrifice to get the patient to a hospital is also an ordained minister and preached the boy's funeral, in addition to giving blood himself for a transfusion. He was later indicted for manslaughter. The case was, however, dismissed, and we have heard nothing from it since.

The hardest fought case that has ever come under my observation occurred this year in Louisville. A little girl nine years old had a compound fracture of both bones of the forearm which occurred while playing in a vacant lot at school. The attending physician sutured the skin wound and applied traction to the hand. Gas gangrene developed and the forearm was later amputated at the City Hospital. Great stress was laid on the point at the trial as to whether or not debridement was done and whether gas gangrene antitoxin was given. There was conflicting testimony as to whether or not this antitoxin was given, and Mr. Curtis, our attorney, does not hesitate to say that he feels sure that in case the jury and judge believed that the gas gangrene antitoxin was not given that the case would have gone against the defendant doctor. As it was, the jury found for the defendant, but the verdict was not unanimous.

It is well for all physicians to remember this point; as it has never been customary in ordinary wounds to give gas gangrene prophylaxis.

We are delighted with the fact that the number of suits filed as the result of bad results in fractures has again decreased. We like to believe that the reason for this is the emphasis that we have laid each year on the idea of the attending physician having an x-ray picture made of every case of suspected fracture or dislocation, and through these sixteen years we believe this is bearing fruit. A few years ago our records showed that 70 to 73 per cent of all cases were brought as a result of a deformity or some bad result in fractures. Now that percentage is less than 50 per cent.

On the other hand, the number of suits resulting from x-ray burns, improper interpretation of films, etc., has increased. This is probably due to the more general use of the x-ray, possibly by some who are not sufficiently skilled in its use.

There are many dozens of suits threatened each year that are never filed. Many of these are solely for the purpose of not paying the doctor's bill. Our percentage of successes in the courts in the suits that are tried is increasing each year.

May I again express the appreciation of our committee and of the whole Kentucky State Medical Association to the loyal, self-sacrificing doctors who have come to the rescue of defendant fellow-practitioners who for the most part are being unjustly sued.

PRESIDENT HANCOCK: You have heard the report. What is your pleasure?

J. H. PRITCHETT, Louisville: I move it be received and filed.

The motion was seconded and carried.

PRESIDENT HANCOCK: The next report is that of the Committee on Medical Ethics, Dr. Walter I. Hume, Chairman.

WALTER I. HUME, Louisville: Mr. Chairman, our committee really has no report to make. The ethics of our profession seem to be about in status quo ante. We have had no complaints and really have no report.

PRESIDENT HANCOCK: I am sure we are all glad to hear that kind of report from a committee of this importance.

Next is the report of the Committee on Crippled Children, Dr. Owen, Chair-

man. Dr. Owen is not here. He has filed his report and Dr. McCormack will read it.

REPORT OF COMMITTEE ON CRIPPLED CHILDREN

SECRETARY MCCORMACK: This is Dr. Owen's report:

During the last fiscal year, beginning July 1, 1938, and ending June 30, 1939, the Kentucky Crippled Children Commission, which is the official state agency for the care of crippled children whose parents are unable to pay for their treatment, administered state and federal appropriations to provide free examinations, hospitalization, braces and other orthopedic appliances for 1,376 crippled boys and girls under the age of 18 years. This was 215 more individual cases than were handled during the preceding fiscal year.

Of the number treated, 634 were cases that had never been treated before and 742 were patients who had received care and returned for further necessary treatment. Of necessity the Commission always carries many such cases under its supervision since the treatment of a crippled child frequently extends over a period of years. Five hundred and twenty-three of the cases were readmitted for treatment from one to ten times during the year, which made a total of 2,298 services to crippled children. Hospital admissions totaled 1,357, and services, such as braces, casts, and application of other appliances not requiring hospitalization, totaled 941. In order to enable the Commission to handle more cases as rapidly as possible, plaster casts were frequently applied in doctors' offices and measurements for braces were made so children need not remain in the hospital longer than absolutely necessary, thus releasing hospital beds for more urgent cases, as the Commission's waiting list is always a long one.

The Commission handled, on the average, 181 cases per month. Although the Commission's main office is in Louisville and the majority of patients are cared for in Louisville hospitals, other treatment centers continue in Ashland and Lexington, where the Commission has field nurses in charge of these respective districts. Monthly clinics are held in Ashland, weekly clinics in Lexington.

Other free clinics for the examination of crippled children throughout the state were held in the following places: Pine-

ville, Paintsville, Irvine, Jackson, Bowling Green, Ashland, Mt. Vernon, Mt. Sterling, Carrollton, Newport, Hopkinsville, Owensboro, Columbia, Elizabethtown, Harlan, Paducah, Henderson, Richmond, Covington, Glasgow, Somerset, Frankfort, Pikeville, Hazard, Whitesburg. Two thousand and seventy-two cases were examined in these twenty-five clinics which served ninety-two counties.

The incidence of crippling conditions among the cases treated during the year is revealed in the following tabulation of deformities:

<i>Type of Deformity</i>	<i>No. Treated</i>	<i>% of Total</i>
Infantile Paralysis	279	20.3
Congenital Deformities	288	20.9
Osteomyelitis	140	10.2
Bone Tuberculosis	134	9.7
Injuries	113	8.2
Spastic Paralysis	53	3.8
Arthritis	48	3.5
Flat Feet	77	5.6
Scoliosis	34	2.5
Other Paralysis	26	1.9
Rickets	35	2.6
Perthe's Disease	18	1.3
Miscellaneous	131	9.5
Total	1,376	100 %

It is interesting to note that congenital deformities outnumbered deformities caused by infantile paralysis, which may be due to the fact that Kentucky for several years has been fortunate in escaping a severe epidemic of poliomyelitis.

The Orthopedic Advisory Committee, at the request of the Kentucky Society for Crippled Children, has compiled a short pamphlet discussing the symptoms and general care of poliomyelitis, which is ready for distribution and should be especially helpful to school teachers, social workers, parents of young children, and lay people in general.

Miss Marian Williamson, Director of the Kentucky Crippled Children Commission, again expresses her appreciation of the sincere interest and cooperation given her, and members of her staff, by the members of the Kentucky State Medical Association, by members of service clubs and similar organizations, and members of the county health units of the State Board of Health, who render invaluable service in assisting the commission's nurses in the field.

Respectfully submitted,

CHARLES C. GARR.

RICHARD T. HUDSON.

W. BARNETT OWEN, *Chairman*.

I move the report be received and approved.

The motion was seconded and carried.

PRESIDENT HANCOCK: The next report is that of the Committee on the JOURNAL, Guy Aud, Chairman.

REPORT OF COMMITTEE ON THE JOURNAL

GUY AUD, Louisville: The KENTUCKY MEDICAL JOURNAL, the official organ of your Association, is published under the auspices of the Council by the Editor, Arthur McCormack, with an advisory Board composed of Emmett F. Horine, J. B. Lukins, D. P. Hall, Uly H. Smith, and Charles A. Vance.

Your committee has examined the report and the recommendations of the previous committee on the JOURNAL, composed of T. J. Poteet, W. O. McCammon, and Malcom Thompson, Chairman, made to the House of Delegates at the last annual meeting and is pleased to report to you that, in so far as possible, these recommendations have been complied with. The changes made have resulted in a much more attractive, interesting and instructive JOURNAL. The scientific papers now compose the first part of the subject matter of the JOURNAL, followed by the editorial section consisting of editorials, announcements and other items properly belonging in the editorial section of such publications. While many instructive articles on the subject of medical economics have been presented in the JOURNAL during the past year, no definite section has been set aside for such articles. The section of the JOURNAL devoted to personal items and items of general interest, together with the section devoted to questions and answers, have not met with the encouragement they deserve. It is the opinion of your committee that they could be made two of the most enjoyable features of the JOURNAL.

Your committee notes steady improvement in character and preparation of scientific papers presented in the JOURNAL but feel that much could still be done to improve many of the discussions of these papers. Some discussions are written and almost parallel the original paper. Others are long, rambling, ambiguous or have little or no reference to the subject under discussion.

Complaint has been made by various members of societies of some of the specialties, of the difficulty in getting articles read before such societies published in the JOURNAL. This is due, no doubt,

to the financial condition of the JOURNAL, which does not permit of the extra cost involved in the publication of such articles.

Your committee respectfully submits for your consideration the following recommendations:

1. That all discussions of papers published in the JOURNAL be edited and that they should not exceed in length an ordinary discussion of five minutes.

2. That written discussions and discussions including case reports be discouraged.

3. That discussions be short and confined, as far as possible, to the subject under consideration.

4. That the Council enter into contract with special societies whose members are also members of the State Medical Association, for the publication in the JOURNAL of articles written by their members provided said societies furnish sufficient paid advertising to the JOURNAL to cover the actual cost of publishing such articles.

5. That the secretaries of the various component societies of the State Medical Association be encouraged to send to the JOURNAL for publication all personal or other items of general interest.

R. D. ARTHUR.

PAUL B. HALL.

GUY AUD, *Chairman*.

PRESIDENT HANCOCK: You have heard the report of the committee. What is your action on it? Is there a motion that it be accepted?

LOUIS FRANK, Louisville: I move that it be accepted, and the recommendations adopted.

The motion was seconded.

PRESIDENT HANCOCK: Is there discussion?

The question was called for, the motion was put to a vote and carried.

PRESIDENT HANCOCK: We will have the report of the Editor.

SECRETARY MCCORMACK: I have no further report to make. I am very happy for the adoption of these instructions. They are the best that have ever been given to us and we will carry them out as literally as possible.

Report of the Committee on Workmen's Compensation Law, E. S. Allen, Louisville.

REPORT OF COMMITTEE ON WORKMAN'S COMPENSATION LAW

E. S. ALLEN: Your committee on Workman's Compensation law, has functioned very inefficiently from the Chairman's standpoint.

There has been no formal meeting, though your chairman has contacted each member of the Committee directly or by letter, and have written the secretary of each Medical Society in the State, asking suggestions or criticism of the Compensation law as it now exists. Five of the societies have replied.

The suggestions are that quite a number of accident cases are not fully compensated. The hospitalization of certain cases exceeds in cost the general allotment, and the physician in charge receives a minimum compensation for services.

Dr. Wilson, Secretary of Bell County Medical Society, reports the following suggestion recommended by his Society, viz: "That the bills incurred in treatment of compensation cases should be presented to a compensation fund rather than to the individual companies."

Tentative arrangements have been made for the Committee to call on the Governor and present evidence of the inadequacy of the present law in certain cases.

FRANK STRICKLER.

IRA KERNS.

M. D. FLANNERY.

W. H. RICE.

E. S. ALLEN, *Chairman*.

Report of the Delegate to the Convention for the Revision of the U. S. Pharmacopoeia, Virgil E. Simpson, Chairman.

REPORT OF THE DELEGATE TO THE CON- VENTION FOR THE REVISION OF THE U. S. PHARMACOPOEIA

VIRGIL E. SIMPSON, Louisville: The work of the Revision Committee of the U. S. P. X. ends with the convening of the delegates to the U. S. P. Convention which will meet in 1940, at which time a Revision Committee for the purpose of revising U. S. P. XI will be elected. During the past ten years this Committee has been continuously revising the U. S. P. X.

One of the most far-reaching accomplishments of the Convention that met in 1930 was the authorization of the issuance of a primary revision of U. S. P. X, to be followed by Revision Supplements. The Committee has, under this authority, issued two Revision Supple-

ments. The last came off the press and becomes a part of the U. S. P. XI under date of January 1, 1940. This plan not only keeps the Pharmacopoeia up to date but will make possible the issuance of U. S. P. XII within a year from the date of the meeting of the next Convention in 1940. Heretofore, a period of four to five years elapsed before the next book was issued.

Both the service and influence of the Pharmacopoeia are increased by prompt recognition and standardization of therapeutic agents that have come to be recognized since the publication of the U. S. P. XI. In addition to Revision Supplements there are issued also Interim Revisions covering immediate changes in text found to be unsatisfactory or outmoded. The question of the official status of these supplements has been determined by the new Food and Drugs Act.

Spanish Edition

A Spanish Edition of the U. S. P. XI has been translated and issued by the Board of Trustees. Twenty-one republics of Central and South America, as well as Cuba, Puerto Rico and the Philippines have adopted the U. S. P. XI as official in these countries. This scientific bond serves to promote closer economic and political relations with the Spanish speaking American republics and the United States.

New Advisory Boards

Two new Advisory Boards have been authorized by the Revision Committee. The U. S. P. Sterile Products Advisory Board has been assigned the work of setting up standards for surgical sutures, bandages, gauze dressings, cotton and adhesive plaster. While aware of the unsatisfactory status of these materials from the viewpoint of sterility, the Revision Committee was equally aware of the practical difficulties of setting up standards for methods of sterilizing and plans for maintenance of sterility. It would be comparatively simple to require the manufacturers to sterilize these products, but to insure maintenance of sterility under marketing conditions offers difficulties. The Food and Drugs Administration has investigated samples of these products purchased on the open market and found many were not sterile, and urged the U. S. P. to establish some suitable standards.

This Committee has worked in con-

junction with the Revision Committee, national medical, surgical and hospital associations and manufacturers of medical and surgical supplies in establishing standards. The work is well in hand, but the standards were not included in the Supplement just issued, as some further study is necessary.

The second new Advisory Board is known as the U. S. P. Endocrine and Hormone Advisory Board. Subsidiary standards will be available soon for Estrone, Estriadol Monobenzoate, Progerone and Androsterone.

The other two Advisory Boards already in action are (a) U. S. P. Vitamin Advisory Board, (b) U. S. P. Anti-anemia Preparations Advisory Board. The Vitamin Board serves as a center of assay methods investigation. During the year two meetings have been held with more than 100 representatives of private, college and government laboratories in attendance. Such conferences make for acceptance of acceptable and effective methods of standardization.

The Anti-anemia Board has done signal service to the profession. Nearly every manufacturer of liver products in the U. S. A. now submit their products to this Board for approval. The Board further has recommended that no preparation to be used by injection shall be marketed with a potency exceeding 15 units per c.c. It has also recommended that no liver preparation be combined with another agent.

New Admissions

The following agents have been admitted during the past year: Ascorbic acid, Mandelic acid, Nicotine acid, cyclopropane, anterior pituitary - like Hormone, Tribasic magnesium phosphate, pentobarbital sodium, sulfanilamid, thiamine hydrochloride and types II, IV, V, VII and VIII pneumococcic serum.

Articles Published in J.A.M.A. on the Pharmacopoeia and the Physician

Some 48 articles have been published in the J. A. M. A. during 1938 and 1939. These articles were authorized by the Revision Committee and were prepared by authorities on the various subjects covered.

The primary object of these articles was to familiarize the profession with the official preparations of the U. S. P. Unfortunately, perhaps, some of the authors exceeded the intended scope and discussed agents that were not official.

U.S.P. Reference Standards

The U. S. P. Board of Trustees have authorized the preparation and distribution of the following reference standards for official and other bio-assay methods:

Digitalis, ergotoxine, posterior pituitary, pepsin, aconite, epinephrine, onabain, vitamins A, B and D.

As an example of one of the procedures in revision work the following comment is lifted from the official Circulars. Following the Elixir of Sulfanilamide tragedies it was proposed that the term "elixir" be officially defined.

U.S.P. Definition For an Elixir

The following letter has just been received from Dr. A. L. Tatum. Dr. Tatum writes:

Since the Diethylene Glycol tragedies have occurred it would look as though probably the Pharmacopoeia Revision Committee had slipped in the complete absence of definition of what an elixir is. Other preparations are defined in the Pharmacopoeia, but we fail to find any definition of an elixir. Possibly it cannot be defined, but if it could, it would thereby give the Department of Agriculture a weapon and legal basis for action in the future.

I suggest that the appropriate committee take this matter under advisement.

A general discussion of this suggestion is invited. The U. S. P. has introduced definitions for classes of galenical products only when it was clearly necessary to add information dealing with standardization, manufacture or storage, as under Extracta, Fluidextracta, Tinctura, Decocta, Infusa, Suppositoria, etc. However, it was never considered desirable to make the Pharmacopoeia a manual of pharmaceutical information.

The question to decide is whether simple definitions would be useful as standards if extended to all classes of products. After a general discussion the question will be referred to the Subcommittee on Syrups, Elixirs, etc., for further study and a recommendation.

Respectfully submitted,

E. FULLERTON COOK, *Chairman.*

The comment that was made by your Delegate in connection with this follows:

The U. S. P. has made no definition for not only Elixir, but has accorded similar scant courtesy to Syrup, Ointment, Emulsion, Emplastrum, Spirit, Alkaloid and Liniment.

It would seem that there is no more

reason for defining Suppository than for a definition of any of the above listed names. The General Chairman says, "The U. S. P. has introduced definitions for classes of galenical products only when it was clearly necessary to add information dealing with standardization, manufacture or storage." By such policy there would appear to be as much reason for a definition and description for the making of a Simple Elixir as there is for Suppositoria. The book says:

Take of the medicinal substance the prescribed quantity Glycerinated Gelatin, etc.

Elixirs might as well be defined and then let the book say:

Take of the medicinal substance Simple Elixir, etc.

I think the book might very well define Elixirs, Ointments, Emulsions and the others.

However, a repetition of the Elixir Sulfanilamide tragedies will not be prevented by putting a definition of Elixir in the U. S. P. In the first place, the Federal Food and Drug Act is a bit obsolete. Some of its provisions were definitely intended to protect proprietary and patent medicine interests. Any drug manufacturer may make any kind of an elixir of sulfanilamide and sell it legally. The only restriction applies to labeling. The formulae are the property of the manufacturers; there are no regulations for standardization of making. They are not limited to the preparations listed in the U. S. P. nor the N. F. nor New and Non-Official Remedies; even the labeling tells only half truths. It seems strange that a biologic house should be made to have a license from the Public Health Laboratory if doing an interstate business; even a meat packer must have a federal license if he does an interstate business. But a manufacturer of drugs may make a medicinal product that may be sold not only in drug stores but in groceries; he may change the formula when, how and as often as he pleases, and no one can say him nay. The law should be made to provide that no drug for the treatment of disease could be sold except through drug stores manned by licensed pharmacists, and not by them when dangerous or habit forming, save on a licensed physician's prescription.

In the second place, a definition in the U. S. P. would be useless in preventing a repetition of the Elixir of Sulfanilamide tragedies because physicians will

continue to get their pharmacological information from the "literature" of the medical manufacturing concerns instead of from standard texts on pharmacology and the current medical literature. Physicians are not content to let new drug action be studied by those competent to study it; they run amuck on every new remedy, forgetting that one may practice medicine with no material increase in their mortality rates with agents listed in the U. S. P., the N. F. and in New and Non-Official Remedies.

The Pharmacopoeia and the Food and Drug Administration

The cooperative relationship between these two agencies, the one a government law enforcement agency, the other a professional self-constituted incorporated concern, began virtually with the election of the late Dr. Harvey W. Wiley, Chief of the Food and Drug Administration as President of the U. S. P. Convention in 1910. That this relationship continues is best evidenced by the recent statement of Mr. Walter G. Campbell, the present Chief, when he said, "The work of the Revision Committee is quasi-legislative. They are formulating standards that have the full force of law * * * The Food and Drug Administration is an executive agency charged with enforcing these standards."

In completing this ten-year assignment I would respectfully recommend that the House of Delegates elect three members of the Kentucky State Medical Association to represent it at the Decennial Convention meeting in 1940 for the purpose of getting the revision work on U. S. P. XI under way.

Respectfully submitted,

VIRGIL E. SIMPSON.

SECRETARY MCCORMACK: I move the adoption of the report.

The motion was seconded.

PRESIDENT HANCOCK: That motion will carry the election of the delegates?

SECRETARY MCCORMACK: I will move the election as soon as the motion is carried.

The motion was put to a vote and carried.

SECRETARY MCCORMACK: I move that Virgil E. Simpson, John W. Scott, and Siegel Frankel of Louisville be elected as the three delegates from this Association to the National Pharmacopoeial Convention.

The motion was seconded.

JOHN W. SCOTT, Lexington: I am appalled, as long as I am named as one of the delegates, by the work that Dr. Simpson has done. Only a man with his indefatigable energy could have carried on his private practice and done his work too as well as the other things he has done for this Association, and I just can't give that kind of time to it and I haven't the information. I don't see why we don't continue Dr. Simpson in this.

SECRETARY MCCORMACK: Dr. Simpson and you and Dr. Frankel are the three representatives. Dr. Simpson is expected to do all the work.

PRESIDENT HANCOCK: Does that take care of your objections, Dr. Scott?

J. W. SCOTT: It does.

The motion was put to a vote and carried.

PRESIDENT HANCOCK: Dr. Simpson, would you like to give your other report on Scientific Exhibit at this time?

VIRGIL E. SIMPSON, Louisville: I have no report to make except to call your attention to the work which the members of my committee have very ably endeavored to do and which you will find on the floor just above you tomorrow morning. I hope you enjoy it.

SECRETARY MCCORMACK: We have two very distinguished gentlemen present tonight and I would like to move you that a committee of two be appointed to escort to the rostrum Mr. C. P. Loran, the Secretary and Manager of the Southern Medical Association, and Dr. E. L. Henderson, of Louisville, a Councilor for the Southern Medical Association and a Trustee of the American Medical Association, that everybody may see these distinguished gentlemen and hear from them if they have anything to say.

PRESIDENT HANCOCK: Dr. Bradley, will you and Dr. Barbour escort the gentlemen to the rostrum?

PHILIP BARBOUR, Louisville: Mr. President, I have the honor to present to you Mr. Loran, Secretary-Manager of the Southern Medical Association, and our own E. L. Henderson, Councilor of the Southern Medical Association and Trustee of the American Medical Association. (Applause.)

The next report is that of the Committee on Public Health Problems in Education, Dr. Carl Gambill, Georgetown, Chairman.

REPORT OF COMMITTEE ON PUBLIC HEALTH PROBLEMS IN EDUCATION

CARL GAMBILL, Georgetown: The members of the Committee on Public Health Problems in Education were only recently appointed and we have therefore had insufficient time to go into this subject thoroughly. It was felt that probably the best thing we could do would be to present a brief resume of the problems without suggesting any solution, so our report consists of the following brief resume of the public health problems in education.

1. Maintenance of minimal standards of environmental sanitation:

a. Well located school building remote from traffic and health hazards and nuisances.

b. Adequate lighting and ventilation.

c. Adequate opportunities to observe and practice health principles taught in the class room.

d. Protection of the child against the spread of communicable diseases.

e. Protection of the child against accident.

f. Prompt availability of first aid in emergencies plus prompt reference to the family physician, or, if necessary, to the public clinic.

2. Detection of so-called defects. Whether rapid inspections at rather frequent intervals or more thorough examination at greater intervals shall be made for the purpose of detecting defects is a question which must be carefully considered and decided in each locality. It is desirable that particular attention be given to children referred for examination by teachers, nurses, parents, or others. Ordinarily the school, which is an educational organization, should not carry on clinical services designed to correct defects. The parents and certain community agencies are more logically ones to be made responsible for securing the correction of defects.

3. Provision of an effective health education program. The didactic lessons in health must go hand in hand with opportunity to practice the lessons learned. For example, excellent didactic lessons on eyesight conservation may be nullified by requiring the child to do his work in an improperly lighted school room.

In summary, we can say that the public health problems in education may be grouped as follows:

1. Those having to do with maintenance of minimal standards of environmental sanitation.

2. Those having to do with the detection of defects.

3. Those having to do with the provision of an adequate program of health education.

This resume is based on a recent address by Dr. W. W. Bauer, Director, Bureau of Health and Public Instruction, American Medical Association.

CARL M. GAMBILL, Georgetown,
Chairman.

LEE PALMER, Louisville.

J. L. ANDERSON, Manchester.

President Gardner took the chair.

PRESIDENT GARDNER: You have heard the report. What is your pleasure?

ERNEST BRADLEY, Lexington: I move it be adopted.

The motion was seconded and carried.

PRESIDENT GARDNER: Next is the report of the Committee on Study and Provision of Medical Care, E. L. Henderson, Chairman.

REPORT OF COMMITTEE ON STUDY AND PROVISION OF MEDICAL CARE

MEDICAL AND DENTAL SERVICES GIVEN IN KENTUCKY DURING ONE WEEK OF JULY, OCTOBER AND FEBRUARY, 1938-1939

The data given in this report includes findings for each of the three periods of sampling and the summary for all periods.

The method used in collecting data for each of the three periods has been the same. Form IF of the American Medical was mailed to all physicians and dentists of the state. For this period (February, 1939) the mailing list was corrected in so far as was possible; that is, the names of physicians and dentists not in practice were eliminated, as were those of internes, county health officers, and physicians and dentists practicing in institutions.

The periods of sampling will be referred to in this report as the first (July, 1938), second (October, 1938) and third (February, 1939).

Form IF was mailed to 2,583 physicians in the first and second periods and to 899 and 900 dentists respectively for the same periods.

The corrected list for the third period

was 2,381 physicians and 884 dentists. Form IF was mailed to all of them on January 10, 1939. As of February 21, 306 returns were made by physicians, or 12.6%. In the first and second periods the returns were 12% and 11% respectively.

TABLE No. 1

*County Class and Percentage of Total Returns For
Each Class Physicians*

County Class	No. of Counties	% of Returns
Less than 10,000	28	13.5%
10,000—19,999	55	13.7
20,000—29,999	17	19.7
30,000—39,999	7	8.6
40,000—49,999	7	14.8
50,000—69,999	3	13.7
70,000—399,999	3	11.7

TABLE No. 2

*County Class and Percentage of Total Returns For
Each Class Dentists*

County Class	No. of Counties	% of Returns
Less than 10,000	28	4.2%
10,000—19,999	55	6.4
20,000—29,999	17	6.2
30,000—39,999	7	6.5
40,000—49,999	7	5.6
50,000—69,999	3	7.0
70,000—399,999	3	12.0

In the third sampling period the counties with a population of 20,000 to 29,999 made the highest percentage of returns, 19.7%; in the second period the greatest percentage was from counties with a population of 70,000 or more.

TABLE No. 3

*County Population Class Making Highest
Percentage of Returns*

Period	Population Class	% of Returns
First	70,000 and over	40.5%
Second	70,000 and over	37.5
Third	20,000 — 29,999	19.7

The 884 dentists made 45 returns, or 5%. In the preceding periods the returns were 5.7% and 4% respectively.

It is not known whether the physicians and dentists reporting were the same ones for each of the sampling periods; it is quite probable that they were. It is difficult to believe that so small a percentage of physicians and dentists are interested in assisting in working out a plan or plans for providing better medical care for people of Kentucky.

Based upon returns from counties, in the first period 87 counties made 366 returns, in the second period 78 counties made 332 returns and in the third period 78 counties made 351 returns. The returns of physicians and dentists are combined in the above statement.

TABLE NO. 4

<i>Total Number of Returns from Physicians and Dentists</i>		
<i>Period</i>	<i>Counties</i>	<i>No. of Returns</i>
First	87	366
Second	78	332
Third	78	351

Segregating the counties into those having cities of 10,000 or more population as of the 1930 census and those classed as rural, the former made 163 returns and the latter 203 in the first period. In the second period the urbanized counties made 168 returns and the rural 164. In the third period the returns were urban 174 and rural 177.

TABLE NO. 5

<i>Returns by Type of Counties and by Period</i>			
<i>Period</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
First	163	203	366
Second	168	164	332
Third	174	177	351

The percentage distribution of physicians and dentists in the state is as follows: urban physicians, 49.4%; urban dentists, 54.0%; rural physicians, 50.6%; and rural dentists, 44.0%.

TABLE NO. 6

Population Class and Percentage of Total Physicians in Each Class

<i>Population Class</i>	<i>% of Physicians</i>
Less than 10,000	6.5%
10,000—19,999	23.9
20,000—29,999	11.8
30,000—39,999	7.8
40,000—49,999	10.2
50,000—69,999	8.6
70,000 and over	31.2

The analysis of returns by type of practice shows that in the first period general practitioners made 9% of the returns, in the second 8.3% and in the third 9%.

TABLE NO. 7

*Percentage of Returns by Types of Practice
General Practitioners—Physicians*

<i>Period</i>	<i>% of Returns</i>
First	9.0%
Second	8.3
Third	9.0

The mean number of years in practice seems to play a part in determining whether or not returns were made; this is shown in the following table.

TABLE NO. 8

Mean No. of Years in Practice—Physicians

<i>Period</i>	<i>Mean No. of Years</i>
First	21
Second	23
Third	24

Services by Physicians, Persons Receiving Care in Office or Home. In the first period 26,636 persons received medical care as reported by 315 physicians, in the second period 24,170 persons were

seen by 292 physicians, and in the third period 26,206 persons received medical care as reported by 306 physicians, or a total of 77,012 for the combined periods.

Combining the three periods and estimating the total number of patients seen by all of the physicians of the state, the estimated total is 600,012, and based on a minimum charge of \$2, the gross charge to patients would be \$1,200,024 for a three-week period. Information from this and other studies indicates that for the state as a whole the loss in collections is from 14% to 18%*. Calculating the gross mean weekly income for all physicians of the state is \$151.33 per week. The above data indicates the percentage not collectable. This mean is far too high, since it includes charges made by specialists, etc.

Persons Receiving Free Care. In the first period, 4,805, or 18% of those seen by physicians, received free care. In the second period, 4,279, or 17.7% received free care, and in the third period, 4,550, or 17.4%. The total patients receiving free care for the three periods was 13,634. The calculated number for all physicians of the state was 107,145; this means that each physician, theoretically at least, gives free care to 15 patients per week.

TABLE NO. 9

*Percentage of Patients Given Free Care—
Rural and Urban*

<i>Periods</i>	<i>Urban Counties</i>	<i>Rural Counties</i>
First	7.7%	10.8%
Second	8.0%	9.7%
Third	8.6%	8.7%

Persons Referred For Free Care. In the first period the physicians cooperating in this study referred 327 patients or 17.4%. The total patients receiving second period 344 were referred, and in the third period 425, or a total for the three-week period of 1,096.

The estimated number referred by all physicians is 9,524 or nearly 4 patients for each physician of the state for the periods concerned. The calculated number of patients for the period of one year would be 165,100. The estimated number of patients sent to hospitals for free care based on data from a study conducted by lay groups was 15,840 for the period of one year. It is quite clear that the data from the lay group study falls

*Summary Narrative and Statistical Report of Findings from a Survey Made by Certain Lay Groups in Cooperation with the Kentucky Medical Association, 1938.

quite sharply below the existing facts and that the estimated number from Form IF is far too high.

TABLE No. 10

Periods	Persons Referred For Free Care	
	Urban Counties	Rural Counties
First	154	173
Second	167	177
Third	172	253

Free Surgical Care. In the first period 268 persons received free operative care, in the second 450, and in the third 294, a total of 1,012 individuals. The calculated number of free services was 7,143. In the study made by lay groups the calculated total was 5,040.

TABLE No. 11

Periods	Free Surgical Care	
	Urban Counties	Rural Counties
First	116	152
Second	161	289
Third	154	140

Services by Dentists—Persons Receiving Dental Care. In the first period the total number of persons receiving care was 2,710; in the second, 2,045, and in the third 2,188, or a total of 6,943. The calculated total for the period was 136,136.

Patients Receiving Free Care.—In the first period 403 patients received free care; in the second, 234, and in the third, 359, or a total of 996 patients. The percentage of patients receiving free care varied from 11% to 16%.

Patients Referred For Free Care. For the three-week period, 86 patients were referred to someone else for further care. Patients referred to hospitals were 322 for the three-week period, or a calculated number for year's period of 5,564.

In the responses from physicians and dentists the chief abuses were the use of free clinics by persons able to pay and the refusal of patients to pay who were able to do so. A third and interesting statement was made, though not classed as an abuse, indicating the desire of physicians to have better facilities available for care of patients. These counties were Barren, Hardin, Henry, Lincoln, Marion and Scott.

Further data found in tables at the end of the narrative.

SUPPLEMENT No. 1

Percentage	Distribution of Physicians Making Returns			
1—4%	5—14%	15—24%	25—39%	40—100%
Hopkins	Anderson	Allen	Barren	Carroll
Pike	Bath	Bracken	Bourbon	Todd
	Bell	Pendleton	Breathitt	Trimble
	Boone	Butler	Breckenridge	
	Boyd	Carter	Carlisle	
	Boyle	Clay	Fulton	
	Bullitt	Daviess	Henderson	
	Caldwell	Fayette	Knott	
	Calloway	Floyd	Logan	
	Campbell	Franklin	Lyon	
	Kenton	Grayson	McCreary	
	Christian	Hardin	Marion	
	Clark	Henry	Shelby	
	Estill	Letcher	Taylor	
	Fleming	Lincoln		
	Garrard	Livingston		
	Grant	Madison		
	Harlan	Marshall		
	Harrison	Russell		
	Hickman	Scott		
	Jefferson	Warren		
	Jessamine	Edmonson		
	McCracken	Wolfe		
	Mason			
	Mercer			
	Monroe			
	Montgomery			
	Muhlenberg			
	Nicholas			
	Ohio			
	Perry			
	Pulaski			
	Rockcastle			
	Simpson			
	Spencer			
	Trigg			
	Union			
	Webster			
	Whitley			
Total—2	Total—39	Total—22	Total—14	Total—3

SUPPLEMENT No. 2

Percentage	Distribution of Dentists making Returns			
1—4%	5—14%	15—24%	25—39%	40—100%
Fayette	Campbell	Boyle	Carroll	Adair
Jefferson	Kenton	Daviess	Estill	Grayson
	Christian	Hardin	Meade	Johnson
	Floyd	Harlan	Muhlenberg	Knott
	Franklin	Lincoln	Taylor	Knox
	Fulton	Pike		Wayne
	Henderson	Shelby		
	Marion	Union		
	Perry			
Total—2	Total—9	Total—8	Total—5	Total—6

PRESIDENT GARDNER: I will entertain a motion that this report be received and filed.

A. W. DAVIS, Madisonville: I move it be received and filed. The motion was seconded and carried.

PRESIDENT GARDNER: A great deal of

this data which was obtained in this committee was turned over to the Committee on Medical Economics; Dr. Howard's committee has had the advantage of all that information in his committee.

I want to introduce to you again briefly, if he will give us just a word, Mr. C. P. Loran, the Secretary-Manager of the Southern Medical Association. (Applause.)

MR. C. P. LORAN: It certainly is a great pleasure for me to visit again a Kentucky State meeting. Your meeting comes in the fall at a time so frequently when I am so busy getting ready for our own meeting that I am not privileged to attend in Kentucky as often as I would like. It is a great privilege to be here, and I bring you the greetings of the central office and of our President, Dr. Vest, whom I talked to over the telephone a little while ago. He wished to be very kindly remembered to his friends in Kentucky and to send you his well wishes for a successful meeting. We hope that many of you are planning to be with us in Memphis when your fellow-Kentuckian will be advanced to the high office of President, holding the office of President-elect at this time. I thank you for the privilege of speaking just a word to you this evening.

PRESIDENT GARDNER: Mr. Loran having referred to our illustrious Secretary, I will ask him to stand and take a bow. (Applause.)

Next is the report of the Committee on Commercial Exhibits, Dr. C. C. Turner, Glasgow, Chairman.

REPORT OF COMMITTEE ON COMMERCIAL EXHIBITS

C. C. TURNER, Glasgow: I want to read to you the names of the exhibitors: Pet Milk Company, Meade & Johnson, Gilliland Laboratories, Horlick's Malted Milk Company, Lederle Laboratories, Pitman and Moore, A. S. Aloes Company, Zimmerman, Fisher, Theodore Tafel, Dick X-Ray Company, Eli Lilly Company, Mellin's Food, Smith and Klein, French Laboratories, Medical Protective Association, Mosby and Company, Kelly-Kett X-Ray Company, Brooks Denhard Company, W. B. Saunders & Company.

This is the largest number of commercial exhibitors that this Association has ever had, outside of the city of Louisville. They will pay more than the expenses of this meeting. The members therefore

should patronize them in so far as possible.

PRESIDENT GARDNER: You have heard the report of the committee. What is your pleasure?

ERNEST BRADLEY, Lexington: I move its adoption.

SECRETARY MCCORMACK: I second its adoption with considerable pleasure. I would ask you to call attention to your members of the importance of their seeing both the scientific and the commercial exhibits during the session. They furnish a tremendously valuable field, and of course, their continuance depends on our encouragement of them. I hope very much you will help to encourage them by talking to them and seeing their splendid exhibits that you are interested in.

PRESIDENT GARDNER: Those in favor of the motion will say "aye," opposed "no." It is carried.

Next is the report of the Committee on Exhibit of Doctors' Arts, Dr. Jesshill Love, Chairman.

JESSHILL LOVE, Louisville: Last year 193 people registered at the hobby booth and presented their various hobbies as some form of relaxation. Letters were mailed to all of these doctors, and their answers have been very encouraging, so much so that your committee believes that the exhibit this year will be very interesting, and we urge everyone to see it. Your committee also believes that the Doctors' Arts or Hobby Exhibit has a very definite place in the Kentucky Medical Association meetings.

PRESIDENT GARDNER: You have heard the report. What is your pleasure?

J. H. BLACKBURN, Bowling Green: I move its adoption.

The motion was seconded and carried.

PRESIDENT GARDNER: We have the pleasure of having the report of the Committee on the Woman's Auxiliary, by Mrs. R. T. Layman, Elizabethtown, President of the Auxiliary. I understand Mrs. Usher is still President and Mrs. Layman is President-Elect. Mrs. Usher will give the report.

MRS. H. V. USHER, Sedalia: Mr. President, Members of the House of Delegates, Ladies and Gentlemen: As retiring President of the Woman's Auxiliary to the Kentucky State Medical Association, I consider it a privilege to submit a report of our activities during the past year.

We deeply appreciate the wholehearted

interest that you have manifested in our organization. It is encouraging to know that in this great work we have the assurance of the full cooperation and assistance of the State Medical Association.

Immediately following the annual state convention in Louisville in October, 1938, I mailed to all state officers and county presidents our program for the year, called Project for County Auxiliary Development, with twenty-three points of achievement for award. This project had been approved by the advisory board, read and accepted with a unanimous vote at the post-convention board meeting; also at this meeting was suggested and voted a blue ribbon for award. Health education is our outstanding project, and much has been accomplished by our auxiliaries through the earnest efforts of our efficient chairmen, both state and county.

The second mid-year executive board meeting was held in the Brown Hotel, Louisville, January 19, with 16 members present, and splendid reports. Dr. James Robert Hendon was presented and made an interesting talk urging the auxiliary to observe social hygiene day February 1st. Following this were questions and answers.

The Kentucky Medical Auxiliary has sponsored the Social Hygiene Association in the fight against syphilis.

Cancer. Mrs. J. Duffy Hancock, Chairman. A great work has been done on this project, and cancer study has made great strides this year in Kentucky. Almost every auxiliary in the state has reported assisting the Woman's Field Army in the fight against cancer, under the leadership of a former president of the State Federation of Women's Clubs. Our chairman continues her page in the Quarterly.

Tuberculosis. Mrs. Lucius E. Smith, Chairman, has been active. Many of our auxiliaries are making tuberculosis their chief work. Simpson County Auxiliary sponsored a contest of written essays on preventing tuberculosis, by high school pupils. Hardin County Auxiliary also has furnished milk daily, and some groceries, to underprivileged children as a preventive measure against tuberculosis, and put on a style show and carnival Feb. 10 and cleared \$34.39 for the milk fund. They sew for the free bed patients in our State Tuberculosis Sanatorium at Hazelwood,

and made four sheets, six pairs of pillowcases, and several pairs of pajamas. All auxiliaries over the state send dolls, toys, and layettes to mountain children through the Frontier Nursing Service Station in care of Mrs. Mary Breckenridge, Wendover. Franklin County sent 24 layettes to this station. Jefferson and Hardin report the best tuberculosis seal sale ever had.

Public Relations and Child Health and Welfare are combined, chairman, Mrs. Joseph E. Wier. Our state chairman has been very active. All auxiliaries have been active in health education, having programs open to public with speakers on tuberculosis, cancer control, syphilis, and have had programs designed to popularize approval of the pre-marital health examination law for venereal diseases. These were points for award in our program. Eye conservation and prevention of blindness have been added this year. Our chairman recommends Hygeia and Parents' Magazine. Child Health and Welfare page continue in the Quarterly, with question box and answers.

Christmas cheer was brought to the little shut-in tots in local hospitals by the Jefferson County Auxiliary.

Organization Chairman Mrs. John M. Blades and the four Vice-Presidents have made valiant efforts in this line, each working in their allotted districts. As a result, Mercer and Franklin have been reorganized, and Lawrence and Warren are the newly-organized counties. Mrs. Lucius Smith organized Lawrence, while Mrs. Clifton Richards and Mrs. R. T. Layman organized Warren. Judging from the reports, some of these are among our most valuable units.

Doctor's Shop, Mrs. J. B. Lukins, Chairman. This Shop is located near the entrance to Fort Harrod at Harrodsburg and is now ready for visitors. Two glass show-cases contain many interesting old instruments, relics, mementoes, etc., and the walls are covered with interesting pictures, of interest to doctors and their families. Venetian blinds, antique chairs and andirons have been donated, and these add to the beauty and comfort of the Shop.

Historical Collection and Archives were combined this year, Chairman, Mrs. V. A. Stillely. She reports 11 biographies and a list of names of Kentucky physicians who passed away this year. Jefferson County reported 148 biogra-

phies sent to Miss Louise Morel, who is supervising the detail of research.

An exhibit was prepared and carried to the national meeting in St. Louis in May. Two posters donated by Mrs. W. T. Vaughan, of Graves County Auxiliary, show that tuberculosis can be cured when the diagnosis is made early, with proper food and rest, another poster showing some projects the Auxiliary is helping to develop: the McDowell Home in Danville, and tomb; the Jane Todd Crawford home near Greensburg, the Trail with its plantings and signboards, the tomb of Kentucky's pioneer heroine of surgery in Danville, the Doctor's Shop, the Joseph Nathaniel McCormack Memorial Building, replica of the first cabin built by a white man in Kentucky, in 1750 by Dr. Thomas Walker, located in Dr. Walker's Memorial Park, the Frontier Nursing Service represented by the horse-backer.

Hygeia. Mrs. C. C. Turner, Chairman, has written letters to 14 counties asking for chairmen. Out of this number 12 counties appointed chairmen. These names were sent in to the Circulation Manager, Mr. F. V. Cargill. Mr. Cargill reports that the state has more than doubled the subscriptions since last year. Our chairman is commended for her valiant efforts, and we feel that this health magazine is getting before the people. The promotion of Hygeia is one of our projects. In the program we asked that the subscription for Hygeia be placed in local libraries and schools by all auxiliaries and that as nearly as possible the magazine be in every doctor's waiting room for waiting patients to read.

Legislation. Mrs. Eleanor Hume Offutt is chairman. Little has been required in legislative matters, but the Legislative Committee has been filled with an equal number of Democrats and Republicans and is prepared to assist in securing the passage of health legislation desired by the State Board of Health, which may come before the next General Assembly.

Jane Todd Crawford. Mrs. A. T. McCormack, Chairman. Perhaps the most outstanding work of the Jane Todd Crawford Committee the past year is the completion and payment of the \$1,000 pledge to the Southern Medical Auxiliary, for the joint memorial of the states composing the Southern Medical Auxiliary. Kentucky members, in recognition

of the honor conferred upon the state by the election of one of its members as President, Mrs. Luther Bach, eagerly desired that the pledge be paid before Mrs. Bach relinquished her office. The total sum was paid to the Treasurer of the Southern Medical Auxiliary, presentation being made by the President, Mrs. Harlan V. Usher, at the annual meeting of the Southern Medical Auxiliary held in the Skirvin Hotel at Oklahoma City, Oklahoma, November 16, 1938.

Jane Todd Crawford Day, December 13, was observed by every Auxiliary in the state in various ways. Lawrence County was organized on December 13. Many listened in to the dramatization story over WAVE. Some had teas, some covered dish luncheons.

Jane Todd Crawford Library. Many valuable books have been contributed to this library, especially by Jefferson County and Franklin. These include works of Kipling, Sir Thomas Moore, Longfellow, and other authors of note. The library has developed into a real community asset.

Jane Todd Crawford Trail. Highway beautification has made little progress this year. Sixty miles is a length to plant. It will require five years of consecutive constructive work to make much of a demonstration on this highway. Several bushels of iris were planted last fall. Spring activities include flower seed of various types, bulbs, lilacs, bushes, sedum, syringa, etc.

Radio. Mrs. Samuel H. Flowers is Chairman. The following is the radio work done since my term of office. December 13, Jane Todd Crawford Day, a dramatization by our Radio Chairman, repeated for the second time over WAVE in Louisville, was broadcast over a station in Salt Lake City, Utah, over WLW in Cincinnati, Ohio. This dramatization was read by request before the Louisville branch of the National League of Pen Women and before the Scribler's Club, a branch of the University Women. The dramatization was chosen by the Public Relations Chairman of the Woman's Auxiliary to the AMA for distribution in America. Hundreds of complimentary letters have been mailed throughout the country. Distribution of this dramatization was made at the Southern Medical Auxiliary meeting by our Jane Todd Crawford Chairman, Mrs. A. T. McCor-

mack, whose inspiration led Mrs. Flowers to write this dramatization.

Doctor's Day, April 13, was celebrated by a round table discussion of Dr. Thomas Walker, the first white man to enter Kentucky. This program was broadcast over WAVE on the above-mentioned date, with state officers of the Woman's Auxiliary taking part in the program. Our State Radio Chairman has had the pleasure of serving with Mrs. Heller, State Commander of the Woman's Field Army for the Control of Cancer at the official opening of the White House in Liberty Park in April. This opening was broadcast over WAVE.

Since January 1 our Radio Chairman has had the distinction and honor of serving as Supervisor of Health Education by Radio for the Kentucky State Department of Health. A series of programs were written and presented over WHAS, and the response from our own state and fifteen other states was most complimentary to the sincere efforts made by the State Department of Health in this new field of endeavor. These programs will continue, beginning September 2. Watch for the announcement in the columns of your daily paper.

Quarterly. The Quarterly publication of the Woman's Auxiliary Section of the Kentucky Medical Journal has now reached its eighth birthday, has completed eight full years of regular publication, thirty-two separate issues, and never was more widely known than it is today. Requests have come from the four corners of these United States and Canada for copies. Since September, 1937, there have been mailed out 936 copies to Auxiliary members. These are in addition to the 1,800 physicians, along with the Kentucky Medical Journal mailed four times a year. This is financed principally by advertisements. For the past year we have enjoyed the gratifying sense of security conferred upon us by the Kentucky State Medical Association at the last annual meeting when they appropriated a contingent fund of \$500 to take care of bills we might not be able to pay. Fortunately, we have not needed to use this money to date, due to the increase in advertising contracts. Here we want to stop and express our thanks and deep appreciation to you for this fund. These advertisements have been secured mainly by the new executive staff, the Advertising Man-

ager, Mrs. Joseph E. Wier. We feel deeply indebted to the Editor, Mrs. McCormack, the Business Manager, Mrs. William Emrich, Mrs. Wier, and all who have contributed to this wonderful publication that we prize so highly.

I have attended the Southern Medical Auxiliary in Oklahoma City in November, the national meeting in St. Louis in May, attended the dedication of the McDowell Home in Danville May 20, and called the Auxiliary together in the room where the operation was performed, made a trip to Fulton February 21 in the interest of the Auxiliary, then attended the Marshall County Auxiliary in March where the Auxiliary enjoyed a dinner with the Medical Society; I visited the Franklin County Auxiliary the twelfth of March, and then in May I visited the McCracken County Auxiliary. I made two trips to Murray in the interest of the Auxiliary.

We have:

Members state at large	26
Active members	320
Honorary members	5
Associate members	4
Deceased members	3
Total	352

25 counties included in State Auxiliaries
11 Auxiliary Units.

We have tried to put before you an account of the activities of the Woman's Auxiliary during the past year. We hope that you will not hesitate to offer any constructive criticism or suggestion which is to serve you, the medical profession.

To serve as President of your Auxiliary has been a happy privilege and honor which I shall always cherish.

PRESIDENT GARDNER: On behalf of the Association I wish to express our appreciation for Mrs. Usher's report and to extend to the other women of the Auxiliary our cordial good wishes for their presence here this evening. We appreciate the Woman's Auxiliary. They have for a number of years done a real piece of constructive work; they have taken their work seriously and you have all doubtless been impressed by the development of the Bulletin of the Auxiliary, which is a very creditable publication. They are interested in many activities, and something new is being added from year to year. I think the outstanding work, of course, has been the development of the memorials of Jane Todd

Crawford, Ephraim McDowell, Jane Todd Crawford Highway, the Doctor's Shop, and the Library at Greensburg, and numerous other things which at the moment I do not recall.

Dr. Scott and I are scheduled, I notice, to visit the Woman's Auxiliary tomorrow a short time after Dr. Scott's installation as President. In the event that I should not be able to come I am going to deputize Dr. Scott, if he does come, to again express my best wishes to you. It has been my privilege to appear before you many times heretofore as a member of the Advisory Council of the State Association and last year as your President-Elect, so if anything happens to me tomorrow that I don't get there you will know you have my good wishes. Thank you very much.

I would like to have the report of the Committee on the Report of the Council.

J. H. PRITCHETT, Louisville: Dr. Glenn had to go home.

The Committee on Report of Council has carefully reviewed the report of the Council of the Kentucky State Medical Association to the House of Delegates and recommends the adoption of that report. The Kentucky State Medical Association should be congratulated for its past achievements as specified in the report of the Council. Furthermore, the committee believes that the proper steps have been taken to establish the basic principles on which a program can be set up to administer better medical service to our medically needy in Kentucky.

Your committee recommends that the House of Delegates ratify the election of Dr. J. Duffy Hancock, who was unanimously chosen by the Council as a delegate to the American Medical Association to succeed Dr. E. L. Henderson who has resigned.

Submitted by:

J. P. GLENN, *Chairman*.

CLARK BAILEY.

J. H. PRITCHETT.

PRESIDENT GARDNER: You have heard the report of the Committee on Report of the Council.

SECRETARY MCCORMACK: I move it be adopted. The motion was seconded.

JOHN W. SCOTT, Lexington: I wonder how long this report of the Council has been in the hands of the committee.

PRESIDENT GARDNER: It was referred

to them immediately after it was read this morning.

J. W. SCOTT: Mr. President, why shouldn't the report of the Council be in the hands of the committee long enough for the committee to come to some rational conclusion about it. Dr. Pritchett sat in here and I presume the other members of his committee did, until time for dinner; he then went to dinner, and he came back here pretty promptly. That committee certainly hasn't had very much time. This report of the Council is very important.

SECRETARY MCCORMACK: The report of the Council was in the hands of the committee on August 20 and has been since that time.

PRESIDENT GARDNER: It was referred formally today. They probably had advance copies.

J. W. SCOTT: They have had copies August 20?

SECRETARY MCCORMACK: Yes.

J. W. SCOTT: Then I have taken your time unnecessarily. That is quite a different situation.

PRESIDENT GARDNER: I think that point is very well taken, Dr. Scott. The committee should have time to study it thoroughly. It is customary that they receive advance copies. That reference committee was appointed some time ago. This does not include that part of the report of the Committee on Medical Economics.

J. W. SCOTT: It doesn't constitute anything like an election of a delegate to the A. M. A., does it?

PRESIDENT GARDNER: The Council has elected Dr. Hancock to fill out the unexpired term of Dr. Henderson. The Council has authority to do that because the delegates to the A. M. A. are not officers of the Association, so the Council has that right—to elect a man to fill out an unexpired term.

J. W. SCOTT: I expected this to come up on Thursday, because I have something to say on that subject. I think that the Council has saved the House of Delegates too much trouble. The vacancy occurred in the place of delegate to the A. M. A. at a time when there was no need whatever for a delegate to the A. M. A. The delegate to the A. M. A. has no function to perform until the House of Delegates of the A. M. A. meets. This House should have the right and privilege of electing its own

officers. The Council is an ad interim body. It is the executive committee of this House, and when it undertakes to fill the place of a vacancy which, as I understand it, continues another year, it has done something that this House should have the privilege of doing. Now it may be said that if there were a called meeting of the A. M. A. it would be necessary to have a delegate. Called meetings of the A. M. A. are not called overnight, and this delegate could have been elected by the Council just as quickly as the A. M. A. could possibly call a meeting of the House of Delegates. Fortunately, there is nothing personal in this. I count Dr. Hancock one of my very good friends. I have no criticism in the world of him as a delegate to the A. M. A., but I have a distinct criticism of the action of the Council in electing him to fill this vacancy. In fact, the Council did it over my protest. I protested when the matter was broached to me, that this vacancy should be allowed to exist until some need for its being filled arose, unless the House of Delegates met in the interim. At such time when the House of Delegates meets it should have the privilege of selecting its own officers and not have them selected for it by the Council.

As a matter of fact, I haven't had the minutes of the Council; I don't know just whether this was done at one of those meetings which isn't a meeting by which the Council is canvassed by mail. If it was done that way the action is void, in my opinion, for the reason that that is not really a meeting of the Council. If the Council as a matter of fact at the Mammoth Cave meeting did ratify that previous action and elect Dr. Hancock then, I think he is in fact a delegate from this Association to the A. M. A. If it did not, I think that kind of action which is useful in an emergency but is useful only by unanimous consent should not be the action of this House of Delegates. I think this House of Delegates should have the opportunity to elect its own officers.

PRESIDENT GARDNER: I will ask Dr. Vance to speak to this point as Chairman of the Council.

LOUIS FRANK, Louisville: Before you begin, I would like to ask the Secretary, is a delegate to the American Medical

Association an officer of this Association?

SECRETARY MCCORMACK: No.

LOUIS FRANK: Or a representative?

SECRETARY MCCORMACK: A representative.

LOUIS FRANK: If he is not an officer I should like to ask, has the Council a right to elect a representative or does it have a right only to elect officers of the Association?

PRESIDENT GARDNER: It has no right to elect officers except in the event of a vacancy the Council may fill a vacancy until the next annual meeting. That is specified, but the Council elects committees and transacts various other business, so it seems to me it would have the right, if it wants to, to elect a representative to the A. M. A. to fill out that unexpired term.

LOUIS FRANK: Personally I would very much doubt that.

PRESIDENT GARDNER: "The officers of the Association shall be a President, three Vice-Presidents, a Secretary, a Treasurer, and eleven Councilors."

LOUIS FRANK: What are the duties of the Councilors ad interim?

PRESIDENT GARDNER: "The Council shall be the executive body of the House of Delegates and between sessions shall exercise the powers conferred on the House of Delegates by the Constitution and By-Laws." Now then, in the event of a vacancy, "The Council shall through its chairman make an annual report to the House of Delegates at such time as may be provided, which report shall include an audit of the accounts of the Secretary and Treasurer and other agents of the Association, and shall also specify the character and cost of all the publications of the Association during the year and the amounts of all other property belonging to the Association or under its control," etc. and "In the event of a vacancy in any office the Council may fill the same until the annual election."

LOUIS FRANK: This is not an officer.

PRESIDENT GARDNER: It is not an officer, it is a representative.

J. W. SCOTT: Why should it have the right when there is no specification for filling that?

PRESIDENT GARDNER: It is because Dr. Davis was elected until the next annual meeting; Dr. Davis was elected as an officer to fill out an unexpired term, and

he or his successor will be elected on Thursday.

J. W. SCOTT: As I heard the Constitution read, your extract from it doesn't authorize it to elect a representative at all.

PRESIDENT GARDNER: It is only the broad powers given to it here, "The Council shall be the executive body of the House of Delegates and between sessions shall exercise the powers conferred on the House of Delegates by the Constitution and By-Laws." They have as much power as the House of Delegates between annual sessions, according to that.

J. W. SCOTT: I grant you they have the power if they did it constitutionally, but it doesn't seem to me that one of these United States mail meetings stands as a legal meeting unless by unanimous consent.

PRESIDENT GARDNER: I think if a man had never been heard of, whose name was submitted to the Council, there might be some objection, but if a man is fairly well known in the Society and his name is submitted to all Councilors by mail, it seems to me that it would be within their power to vote yes or no.

LOUIS FRANK: There is no objection to the man.

J. W. SCOTT: It is the principle. I am glad it is the man it is because then we can discuss the principle and not the man.

PRESIDENT GARDNER: You speak of the mail action.

J. W. SCOTT: It is the election by eleven men instead of this House of Delegates. The House of Delegates met in ample time for anybody to be elected. Dr. Hancock hasn't functioned in any way and there were a thousand chances to one that he wouldn't function in any way when he was elected.

PRESIDENT GARDNER: All right, Dr. Vance.

C. A. VANCE, Lexington: Mr. President, as long as I have been on the Council we have had votes such as that and there has never been any question about it. The Council has met sometimes eight and ten times a year and several times a year there have been mail votes. Dr. Hancock was nominated for this vacancy because of the thought that there might be a called meeting of the House of Delegates of the A. M. A. He was nominated by Dr. Lukins of Louisville, and the votes

were sent around and we voted. My understanding has always been that in the absence of a meeting of the House of Delegates the Council would act just as an executive committee. They are absolutely responsible to the House of Delegates and act in their absence. As far as I am concerned I don't see anything wrong with it at all.

J. W. SCOTT: May I ask Dr. Vance a question? When I suggested to him that they wait I understood he saw the propriety of it and told me he was going to communicate with the Secretary, who, as you know, has a great deal of influence with the Council, and that he thought they would put it off until the House of Delegates met, and I considered then that the incident was closed and I went so far in the latter part of July as to address a letter to the JOURNAL calling the attention of the membership of the Association to the fact that a vacancy would exist, and saying that I thought they should consider whom they wished to succeed Dr. Henderson. I sent that letter to my friend, Dr. McCormack, and said that I didn't care about making the announcement myself: the President was ill; and if Dr. Hancock, who was acting President wished to make the announcement or if he as Editor of the JOURNAL or Secretary of the Association wished to make it, it was perfectly all right, but I thought it ought to be brought to their attention. As far as I know that letter was lost in the mail, but the conversation I had with Dr. Vance was face to face, and he told me that he would discuss it with Dr. McCormack. Then I went so far as to discuss it with one of my friends, Dr. Bradley, and I tried to persuade him to allow himself to be put up as delegate, and talked to Dr. Vance about it. He said, "It is too late. We elected Dr. Duffy Hancock," much to my surprise.

C. A. VANCE: I talked to Dr. Bradley long before you did, Dr. Scott.

J. W. SCOTT: I know you did. That is what brought it up, that Dr. Bradley had declined to be made the delegate, and I said, "Why that is perfectly fine. I can't think of anybody I would rather have as delegate than Dr. Bradley, but no one should be elected since he has declined, why don't we give the House of Delegates a chance to elect its own representative. After all, they have an op-

portunity. He has no function to perform until then. Why should eleven men select a representative from this Association when the properly constituted body is going to meet in two months?" As Dr. Vance says, in case of a called meeting of the House of Delegates, it couldn't be called any more quickly than you could reach these men by telephone: if that is all that is necessary that could be done in an hour.

I submit, gentlemen, that this was improperly done, that this was a usurpation of the privilege and right of this House when the Council undertook to name a representative whom we have the time to name ourselves.

PRESIDENT GARDNER: In all good humor, and in a humorous vein, Dr. Scott, was it after Dr. Bradley declined to have his name considered by the Council that you suggested that the House of Delegates ought to have a chance at it?

J. W. SCOTT: I knew nothing about it until he had already declined. That is what brought it up. Dr. Vance said to me, "Dr. Bradley has declined. Whom would you suggest?" I didn't know anything about it before. I think he should not have been named. Nobody had a right to name him, but if he had been named that was another thing, but I didn't know anything about it. I had only one conversation with Dr. Vance about it.

PRESIDENT GARDNER: It looked like the Council was at least feeling around to get a fairly capable man, didn't it?

J. W. SCOTT: Oh, I grant you.

ERNEST BRADLEY, Lexington: Mr. President, my name has been dragged through the mire here. I think the Council had a perfect right to name a man in the interim when the House of Delegates doesn't meet. I think it was perfectly proper for the Council to name anyone it pleased to act until Thursday when the election comes up, just as any society has an executive committee, or any company, when they can't call all the members together at a time. That is what I understand has been done. Somebody said to fill out the unexpired term of Dr. Henderson, but I don't think they mean that.

PRESIDENT GARDNER: I would like to have the Council say.

ERNEST BRADLEY: That wouldn't be right.

SECRETARY MCCORMACK: This is not

the first time this has happened. Vacancies have been filled on the delegation at other times in the history of the Association by the Council and have been ratified on the report of the Council. The Council during the interim between meetings has all the power and authority of the House of Delegates. Called meetings of the House of Delegates of the American Medical Association have been called by wire. The telegram on one occasion was received on Monday and the meeting of the House of Delegates was on the following Friday. It would have been absolutely impossible to have taken any time for the election and certification of a delegate in that time. At the time this action was taken there wasn't any ulterior motive in it, there wasn't any suggestion or thought about it except that we knew there was impending a called meeting of the House of Delegates of the American Medical Association for the purpose of considering national legislation. It was liable to be called at any moment. I had been informed of that fact, and I called the attention of the Council to it. The Council elected Dr. Hancock formally and called for other nominations and elected him by a unanimous vote to fill the unexpired term subject to the ratification of the House of Delegates. The House of Delegates now has the recommendation of the committee that that selection be ratified. That is in full accord with the action of any executive board. Dr. Henderson will tell you that the Board of Trustees of the American Medical Association take sometimes two or three mail votes a week. It would be a very foolish thing for us to call a meeting of the House of Delegates every time a matter of moment to the Association arose that could be settled by correspondence. We feel that we are not only the trustees of your authority but that we are trustees of your function, and it costs between \$200 and \$250 to call a meeting and we don't call them idly, but we do have them when it is necessary. This is in exact accordance with precedent. No question was ever raised before, and frankly I don't see any reason why it should be raised now. The only thing in the world the House of Delegates can act on now, if any other nomination is made, is a motion that the action of the Council should not be confirmed, which of course would be in order. It is a matter entirely up

to the House of Delegates, now that the recommendation has been reported to them that Dr. Hancock's election be ratified. That is the only matter before the House and it is very properly before it in accordance with our precedent, our Constitution, and with the action taken by the Board of Trustees of the parent body in similar matters all the time. They are constantly electing members, representatives to all sorts of organizations by mail vote, and are constantly doing far more important things than we have ever done by mail vote. It is done by every executive board of every organization of which I was ever a member, in order to save both money and time whenever any sort of emergency arose.

J. W. SCOTT: This was not an interim appointment; it was just for the whole unexpired term.

SECRETARY MCCORMACK: For the unexpired term subject to the ratification of the House of Delegates.

PRESIDENT GARDNER: Dr. Scott, here is what I really believe about it. It may not have been the most diplomatic or the most graceful thing for the Council to have done, but I believe they had an absolute right to do it if they wanted to.

J. W. SCOTT: I agree with that exactly. I think it is perfectly legal.

PRESIDENT GARDNER: The motion is made and seconded that the report of the Council be approved.

SECRETARY MCCORMACK: That includes the usual appropriations because they are not specifically mentioned in the report of the committee, but they are included in the report of the Council, and I wanted you to know that before you voted.

PRESIDENT GARDNER: Some of them were specified.

SECRETARY MCCORMACK: They are all specified in the report of the Council. If you approve that, you include the appropriations.

PRESIDENT GARDNER: All in favor make it known by saying "aye," opposed "no." It is so ordered.

We will be glad to hear from Dr. Abell, Past President of the American Medical Association, on the report of the Committee on Public Relations.

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS

IRVIN ABELL, Louisville: Since your committee had the opportunity of reporting to you last year there has been no

session of the General Assembly of Kentucky, and therefore no new legislation on the statute books.

At your last session, inspired by the action of the American Medical Association, you adopted reports strongly supporting the action of the parent body in regard to legislation implementing the National Health Program. Following the actions of the House of Delegates of the American Medical Association at its Chicago session and that of this Association adopting resolutions based on the five recommendations contained in the Program, it is important to bear in mind that the Wagner National Health Bill of 1939 did not recognize either the spirit or the text of these resolutions. At the recent St. Louis Session of the American Medical Association, the special reference committee on the Wagner Health Bill carefully considered it and in their report it was stated. "Any criticism of this bill by the Association is not to be construed, therefore, as a repudiation of any of the principles adopted by the 1938 Special Session of the House of Delegates."

Your committee desires to report that the present text of the Wagner Bill (S. 1620) is loosely drawn, would be impossible of successful administration, and that its enactment into law would retard rather than assist in the development of a sound National Health Program. The bill in its present text not only provides dissipation of the administration health activities of the several bureaus of the Federal Government which have been so long condensed, and which every student of government and every successful congressional committee that has ever investigated the organization of the federal government knows is sound, but it actually provides for public health and medical activities under the control of several new bureaus, none of which have the qualified professional knowledge or experience in the administration of the proposed new functions. Its enactment would not only be unwise and uneconomical expenditure of public funds, but would actually provide for the creation of new bureaus that would duplicate the functions of the United States Public Health Service and Children's Bureau under the Social Security Board and the Department of Labor instead of consolidating public health activities in a single federal agency as is so highly desirable. As is too frequently the case with legis-

lation of this type, the Wagner Bill attempts to create in one enactment far more extensive service than can be administered wisely or economically for the benefit of the people of the country.

This Association especially approves the action of the American Medical Association in insisting that medical service should only be provided under professional control and that it should be limited to the indigent and the medically indigent, and that federal assistance should only be extended where definite surveys show that the states or political subdivisions of states are not able from their own resources to provide good medical service for these important classes of our population. Machinery should be set up in any such legislation for the determination of these matters.

Your committee especially condemns the provisions in the Wagner Bill providing for the building and establishment of a system of public hospitals in competition with existing private institutions. That there are unquestioned faults and inaccuracies in the present hospital system must be recognized, but the spirit which has established church and other voluntary hospitals in this country is one of which people should be proud. If additional hospitals are to be built in those sections where needed and the extension of existing hospital facilities provided for, we would insist that this be done without the destruction of the voluntary hospitals.

The provision in the Wagner Bill for medical service under the control of the Social Security Board has no single reasonable argument for its support. There is not one single person connected with this Board who has had any experience in this respect, and no single one of its present vast insurance and public assistance functions could be extended to include medical service without doing violence to every recognized principle of economical administration. As if there were not enough enormities in the Wagner Bill itself, at the hearing before the Senate Committee on Education and Labor there was a certain amount of support for an additional provision that industrial hygiene be placed under the control of the United States Department of Labor at the federal level, and under the State Department of Labor at the state level. This would provide further

unnecessary and expensive duplication of existing machinery. These and other objections and suggestions too numerous to mention have been presented at the hearings before the Senate Committee on Education and Labor, and on August 4, 1939, Senator Murray of Montana, Chairman of the Committee, submitted a preliminary report on the Wagner Bill establishing a National Health Program. Careful reading of this report shows that the Committee has under consideration the objections which have been raised to the Wagner Health Bill. For Example, it is stated:

"It is well known that the medical profession, the hospitals, and other practitioners and agencies have been accustomed to shoulder a substantial part of the burden of providing medical care without charge to those unable to pay for it. Physicians, hospitals, and others are giving a tremendous volume of service without charge to the indigent and to others supposedly unable to pay. To some extent, physicians recoup for this free service by charging the well-to-do in proportion to their means, but many physicians serving a clientele with small or modest incomes find themselves swamped with calls and demands for free care and many are unable to earn incomes reasonably commensurate with their training, ability, and their own financial needs.

"We cannot emphasize too strongly or say too often that when we speak of inadequate medical care, of insufficient services by large numbers of people, or of the economic problems in paying for care, we are not criticizing the physicians or the hospitals or others who furnish service. They have long been performing humanitarian services deserving the highest praise. It is not the responsibility of doctors or hospitals or related groups that large sectors of the population have limited economic resources. We know well enough how cooperatively and how sympathetically doctors, hospitals, and others contribute as best they can toward solving the financial problems of their patients. Both we and the professions are trying to see an existing problem in its proper proportions in order that we and they together can devise a good solution.

"When the evidence shows how many millions of people have insufficient

means to purchase the care they need, it is referring not to people who have applied for care and been denied it, but to people who do not receive, or who receive insufficiently, the care they need.

"Voluntary organizations of many kinds, lay and professional, civic, welfare, fraternal, religious, charitable, philanthropic, or educational, have made such large contributions to the health and the welfare of our people, to their medical care and toward a solution of medical economic problems, that it is quite unnecessary to review the subject. Every informed citizen knows of the vital role which such voluntary organizations have played in the development of our professions, our hospitals, and our facilities generally, and of the prominent part they have played in helping to moderate or solve the economic problem created by sickness for millions of people. And every right-thinking citizen will insist that in a health program for the future there shall be adequate provision for the continued vigorous activity of the voluntary organizations.

"There is no escaping the fact that the costs of sickness are a heavy burden on large portions of our population, that modern medical care is of necessity elaborate and expensive in many cases of serious illness, that the costs may be out of reach for people with small incomes, and that the burden should not be left so largely on the practitioners, hospitals, and voluntary organizations as it is today. We must provide substantial solutions, as we believe we can, which will be beneficial alike to patients, to the entire public, to practitioners, to the hospitals, and to the related institutions and organizations."

It is further stated: "Scarcely a witness raised objection against the objectives of the bill, though representatives of some organizations presented serious criticisms, some of which we shall discuss specifically later.

"The committee believes that the bill offers a basis for constructive developments. We do not at this time have solutions for all of the problems which have developed in the study of the bill, but we are confident that solutions will be found as we proceed with our study and as we continue to receive critical advice and assistance which we welcome from public and professional groups and

individuals who have assured us of their cooperation."

Again, it is stated further: "It may be emphasized that the operation of health or medical care programs under this bill is a state and not a federal obligation. The bill does not propose to set up a federal system of medical care; it undertakes only to encourage and aid the states in setting up their own programs. Neither, as seemed to be thought by some witnesses, does the bill set up a federal system of health insurance or of state medicine or of socialized medicine, nor does it require any state to set up any particular type of medical service. The role of the federal government remains, as it is now, to give financial and technical aid to the states.

"Operation by the states. We cannot emphasize too strongly that the federal government does not become the operating agency for health service under this bill; plans for health services, medical care and temporary disability compensation would be administered and furnished by the states through state plans of their own devising and design. The intent has been to lay down in the bill only such standards and provisions as are necessary to assure that federal funds will be used by the states for the intended purposes and with reasonable economy and efficiency."

Again, Senator Murray said: "The amount of federal aid under a federal-state cooperative program should be measured by the size or degree of the need for such aid. There can be no objection to this principle. It would be unsound, however, to assign to an administrative officer, except in some unusual emergency and only for the duration of such an emergency, the authority to give or to withhold grants-in-aid at his sole discretion. The orderly processes of government require that the Congress shall determine, in clear and unequivocal language, the conditions and circumstances under which federal aid may be available to each state and the formulas which shall determine the amount of such aid. In a federal-state cooperative program, each state is entitled to equal opportunity to make its showing of need and to equal opportunity for aid according to its need for such aid.

"The procedures stipulated in the bill

follow the precedents laid down for the administration of federal grants-in-aid under the Social Security Act and under other acts which experience has shown are practicable and equitable. The testimony to which we have already referred shows that the federal-state co-operative program under the health titles (V and VI) has operated smoothly and without domination of the states by the federal government. The details of the procedures may require amendment, and we are studying them carefully."

In regard to the construction of needed hospitals, the committee report states:

"Fears have been expressed, at the hearings, in the press, and in professional circles, that the hospital construction program contemplated in Title XII may lead to the building of public hospitals in communities where they are not needed or where non-governmental hospitals are already adequately serving, or may in the future adequately serve, community needs. The title is not intended to lead to any such unsound activity. Before any new hospital construction is undertaken, the available beds in qualified, existing, non-governmental and governmental hospitals should be used, provided the type of service meets accepted standards and the charges for the use of such beds are reasonable. Section 1201 declares that sums authorized to be appropriated are for the construction and improvement of 'needed' hospitals and Section 1202 provides that the Surgeon General shall make allotments to the states in accordance with rules and regulations, taking into consideration for the several states 'the needed additional hospitals.'

"When we say that there are serious hospital deficiencies in many parts of the United States and for large groups of the population, we are not losing sight of the splendid facilities which have been developed through private as well as through governmental activities. We have no intention whatever of endorsing any proposal that would encourage the building of hospitals where adequate facilities exist or that would encourage the building of public hospitals where private hospital construction would in the normal course of events meet community needs. On the contrary, private activity, construction, and support of hospital

service is a sound and estimable community service. There are, however, areas of the country and large groups of people whose needs for hospitalization are inadequately met and will, by all available evidence, continue to be unmet unless state and local public resources, assisted by the federal government, are utilized to deal with the problem. Farm organizations have testified that such conditions are especially evident in many rural areas. Where qualified hospitals exist, but are inadequately used because they cannot finance the care of persons who require but cannot pay for service, the first necessity is to encourage use of these facilities by solving the financial problems. But where qualified hospitals do not exist or are insufficient, there is need for additional construction.

There is no issue between the intent of the bill and views of those who believe there should be additional safeguards against unnecessary or undesirable hospital construction. Our committee intends this title will require unequivocally clear showing of need through impartial state and local surveys, and clear satisfaction of federal requirements that such needs exist, in addition to reasonable demonstration as to future continuing support of the hospitals.

In this connection, we are studying the methods of financing needed hospital construction and we expect to have further conferences with representatives of hospital organizations to discuss various problems concerning hospital needs and services.

Payment for services furnished by non-governmental hospitals and other agencies. There has been much discussion of this point. The committee is aware of the extensive current practices whereby state and local governments pay for services rendered by non-governmental hospitals, nursing agencies, etc., to needy persons. It is one of the primary purposes of the bill to assist the states in meeting the costs of medical services needed by their citizens and thereby to assist the people in receiving more adequate care. Obviously, the more extensive use of qualified existing hospitals, public and private, is one of the simple and direct methods of achieving this objective. As we have already said, empty beds in qualified hospitals should be filled in communities where

the need for service exists and is not being met. The same principle applies to the use of non-governmental nursing and other agencies.

There is nothing in titles V, VI, or XIII, the titles which deal with federal aid for health or medical services, that would limit any state plan in paying for services furnished by non-governmental as well as by governmental hospitals and agencies. Federal aid would be available toward such expenditures. In similar circumstances, non-governmental hospitals, of which 512 are private, non-servicely used in State plans operating under Title V of the Social Security Act. The Children's Bureau testified at our hearings that the states are purchasing services for crippled children from 601 hospitals, of which 512 are private, non-governmental and 89 are governmental hospitals. Federal aid is assisting in paying for these services, and we have no intention of altering these practices.

The intention of the bill to aid in the use of existing facilities is evident not only in the absence of any prohibition against the use of non-governmental facilities, but also in the provision requiring representation on the state advisory council or councils of members of the professions and agencies, public and private, that furnish services under the plan.

That has been criticized very much because there has been no means of setting up such councils, they have had no authority, their appointment has been rather loose.

However, in order that all doubts and fears on this score may be resolved, the committee is agreed that the bill should be amended by addition of positive provisions that qualified hospitals and agencies, both public and private, may be utilized in the state plans.

The committee stated clearly that the "role of the federal government should be primarily to give financial and technical assistance to the states." In closing, the committee stated:

Some misunderstandings seem to have arisen and criticisms have been expressed concerning parts of the bill. Some witnesses have assumed that it would bring about revolutionary or dangerous changes in medical care. We think these fears are unwarranted but we will welcome further suggestions as to specific

amendments which may safeguard the objectives of the bill. Medical science has reached a commendable status in this country. The bill should encourage the further evolutionary development of medical science, teaching and practice.

The committee has received the assurances of many lay and professional groups that they will be prepared to furnish further information and suggestions. We expect to consult further with representatives of these groups.

We have not yet had adequate time to make exhaustive study of all the problems involved in the legislation proposed by S. 1620. The committee will continue its study of S. 1620 so that a definitive report on the proposed legislation can be submitted soon after the beginning of the next session of the Congress.

We have quoted extensively from this report in order to show you that the Senate Committee is giving earnest study and detailed consideration to the National Health Program. We recommend to our members that they write to one of their Senators or Congressmen for the full report of the hearings on the Wagner Health Bill (S. 1620) so that each can acquaint himself with the objections and criticisms and recommendations for amendments for this bill. It will unquestionably be presented in one form or another in the next session of Congress, and it can only reach a practical degree of satisfaction for either the profession or the people through wise counsel on the part of those whose training and daily work qualify them to speak with some authority.

Your committee feels that it is of first importance that we continue to keep before the minds of the people of Kentucky the character and purposes of its medical organizations. This has been so definitely stated in Article II of the Constitution that we quote it in full.

"The purpose of the Association shall be to federate and bring into compact organization the entire medical profession of the State of Kentucky and to unite with similar associations in other states to form the American Medical Association, with a view to the advancement of medical knowledge, and to the advancement of medical science, to the elevation of the standard of medical education and to the enactment and enforcement of just medical laws; to the promotion of

friendly intercourse among physicians, and to the guarding and fostering of their material interest and to the enlightenment and direction of public opinion in regard to the great problem of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life."

It is with a full knowledge of these principles that the State Medical Association succeeded in passing a vital statistics law in 1853. It is true that this law was ineffective because we had then neither effective state or local governments, but it was a first attempt to find the causes of death that afflict our people. It was at the instance of the State Medical Association that the Medical Practice Act was passed and signed by the Governor on February 23, 1863. The Civil War with its resultant economic and social confusion caused this splendidly conceived attempt to elevate the standards of medical education to be ineffective. Stimulated by these same principles, the medical profession was responsible for the organization in 1878 of the State Board of Health and of the county boards of health. It should give us a feeling of great pride that our medical forbears conducted this new organization successfully although the state appropriated practically no funds for its support. If I remember correctly, the total amount given to the State Board of Health up until the time your father practically finished his term was only \$2,500 a year, not enough to pay for the secretary and the stamps for mail and stationery.

In 1888, the first really successful Medical Practice Act was passed, and in 1918, the State Health Department was really organized on a sound administrative basis, and that is when the increase from \$2,500 began. All of the enactments of law affecting public health and medical practice in Kentucky have been initiated by the Kentucky State Medical Association and all of them have been so developed and enforced "that the profession shall become more capable and honorable within itself and more useful to the people in the prevention and cure of disease and in prolonging and adding comfort to life."

In order to accomplish these high purposes, it became evident more than a half century ago that professional activities must be divorced from party and partisan politics and this has been accomplished to a degree that has obtained in few other states. All of the principles and procedures adopted under these various laws by the State Health Department have been discussed and approved by the House of Delegates of this Association. The people of Kentucky have been generous to the medical profession in that they have left to it the guardianship of their health and medical service. The profession has accepted this great responsibility and has carried the burden both of medical service and protection of the public health with inadequate appropriations. The voluminous and detailed report of our Committee on Medical Economics indicates the measure of success that has met our endeavor. It clearly shows to the people of Kentucky that they can secure just as much good health as they are willing to accept and for which they are willing to pay a reasonable proportion of their income.

The reduction in the cost of tuberculosis since 1911 is more than the increased cost of our road system which has been developed since that time. The reduction in the cost of typhoid fever has provided our people with more than enough money to pay the cost of the present system of public education. These successes, however, are noteworthy because they point out more definitely what remains to be done.

We have a splendid state tuberculosis hospital. Due to the utterly inadequate appropriation for its support last year, only one-half of its beds are now being utilized. One-half of the deaths from cancer in Kentucky are unnecessary and could be prevented if prompt scientific diagnosis and treatment could be applied to them. Perfectly definite reports of the experiences of other states show that our high death rate from pneumonia could be reduced more than one-half if the money were available for its prompt treatment by approved methods. What the profession has already accomplished indicates that there is no need for a change in its basic organizations; we have the plans, the laws and the qualified personnel to bring good medical care to all of our people if the money is made avail-

able to us to cover the cost of such care.

Your committee desires to again bring to the attention of the profession the important provisions of the pre-marital physical examination act which will become effective March 1, 1940. No other legislation has been enacted placing a greater responsibility on physicians. With your approval, the State Department of Health has more than quadrupled the facilities of its laboratories for doing the Kahn test. An average of 600 such examinations of specimens sent in by physicians are made there daily. These are for those who are unable to pay for such examinations, and in addition the private laboratories are having to increase their facilities also. All of these laboratories will be examined under standards set up by the United States Public Health Service, and only those with approved standards may be used for such examinations. The Advisory Committee on Syphilis Control has arranged to have speakers present upon request at any county or district medical meeting to explain the details of the law. You will receive frequent publications containing the most recent scientific advances and the experience of similar laws in other states. Your committee has noted reports from a number of states that a few members of the profession have violated the honorable traditions of medicine by providing certificates without real examination and by attempting to profiteer at the expense of the applicant for the marriage certificate. We bring this to your attention because it must be made evident that such violations of the law and of professional principles will not be permitted in Kentucky. Clothed with the responsibility for the protection of public health which we ourselves have sought because we are the only body qualified to give it, we must make it perfectly clear to our own profession and to the people that any physician who is guilty of prostituting this law will be dealt with accordingly by the body created for this purpose. We are proud of the fact that Kentucky is among the states that freed itself during the prohibition period of all those who sold prescriptions for alcohol without medicinal indications and that we have consistently suspended or revoked the certificates of those who have violated the Harrison Narcotic Act. We trust the period of time for preparation given us under the

pre-marital examination will enable every member of the profession to be so fully acquainted with its provisions that there will be no violations of the trust which it has imposed on each of them.

We are fortunate that several distinguished members of our profession will be members of the General Assembly which will convene this year. Your committee desires to express its gratitude to them for their sacrifice of time and income made in the public interest. "We want a league, offensive and defensive, with every well-wisher of Kentucky and her people."

Respectfully submitted,
IRVIN ABELL, *Chairman*.
J. B. LUKINS.
H. G. REYNOLDS.
WILLIAM D. REDDISH.
A. T. MCCORMACK.

PRESIDENT GARDNER: You have heard the report of the Committee on Public Relations. A motion to approve this report is in order.

ERNEST BRADLEY, Lexington: I move it be approved.

The motion was seconded and carried.

PRESIDENT GARDNER: The next report by Dr. Abell is the Committee on the McDowell Memorial.

IRVIN ABELL, Louisville: We are very happy to report that the restoration of the Ephraim McDowell-Jane Todd Crawford Memorial Home is complete. The building has been restored with fine cooperation between the Works Progress Administration and the Commonwealth of Kentucky through Governor A. B. Chandler and General Bailey P. Wooton, Director, Division of Parks of the State Department of Conservation. Upon the motion of the committee, Mrs. Lettie S. McDowell has been made Custodian of this state shrine. We recommend that this Association express its appreciation to Gov. Chandler, the Honorable George H. Goodman, State Administrator, Works Progress Administration, Mr. Shaw, former District Supervisor, Works Progress Administration, and especially to Mr. Julian A. Oberwarth, the distinguished architect of Frankfort, whose zeal and judgment have contributed more than any other one factor to the success of the restoration. The Association's gratitude should also be expressed to the carpenters, painters, plasterers, plumbers and other laborers who seemed to catch the

spirit of the moment and to really devote themselves to the work.

We desire to express our gratitude to Dr. August Schachner, the distinguished historian of McDowell, who has just presented to the Memorial what remains of the headstone of the McDowell grave at Traveler's Rest. Dr. Schachner rescued the broken pieces of the stone and has preserved them all these years for this distinct purpose. It is important to record here again that Dr. McDowell's remains were removed from their original resting place at Traveler's Rest and re-interred at the monument at McDowell Park at Danville in 1879.

The dedicatory exercises were presided over by C. A. Vance, Chairman of the Council, and were participated in by the Chairman of your Committee, who delivered the dedicatory address, and E. V. Mastin, St. Louis, great-great-grandson of McDowell, J. D. Hancock, Acting President of the Kentucky State Medical Association during the temporary illness of the President, W. E. Gardner; A. T. McCormack, who represented the Academy of Surgeons of Philadelphia and the College of Physicians of Philadelphia, and Dr. Louis Frank, of the Committee, who presented some of the instruments used by Dr. McDowell and some valuable books as a memorial to Dr. Arch Barkley of Lexington (these mementoes were given by Mrs. Barkley and her daughter, Miss Roberta Barkley.) The honorable Chenault Hugueley, Danville, gave an address at the unveiling of a bronze tablet in the memory of Dr. Joseph Weissiger, contemporary and friend of Dr. McDowell, and of Dr. John Rochester Weissiger and his son, Dr. John Gill Weissiger, through whom the McDowell home was preserved and cared for. Evan Weissiger, also a member of this distinguished family. The Honorable Bailey P. Wooton made the address of acceptance of the instruments and books. The entire proceedings of the dedication will be published in the supplement of the November issue of the JOURNAL.

Our Committee desires to acknowledge a contribution of \$500 from the American Gynecological Society which establishes it as one of the Custodians. Dr. Emil Novak, Baltimore, has been selected as a member of the Executive Board to represent this organization. Other members of the Board are as follows: Drs. E. V.

Mastin, Honorary Chairman; Irvin Abell, Chairman, Louis Frank, C. A. Vance, J. Rice Cowan, and A. T. McCormack.

During the year with the fine cooperation of Miss Dorothy D. Blackwell, State Supervisor, Works Progress Administration Museum Project and the Works Progress Administration, we have made 150 models of the restored McDowell home and one of these has been or will be presented to each of the Custodians.

Three years ago the Association voted \$1,000 for the purchase of the home. Your Committee found it unnecessary to use this money, but we desire to recommend an appropriation of \$500 for the purchase of Dr. McDowell's Apothecary Shop which adjoins the home, and that the Kentucky State Medical Association become one of the custodians of the Memorial.

Custodians elected since last year's report are as follows: John W. Scott, our distinguished President-elect, Lexington, and the American Gynecological Society, Evanston, Illinois.

We desire again to express our continued gratitude to the Woman's Auxiliary for their fine cooperation in beautifying the Jane Todd Crawford Trail, the road from Greensburg to Danville over which Mrs. Crawford rode horseback, facing death, according to all the knowledge and standards of her time, and over which she returned on the same horse a few weeks later, restored and made well by Dr. Ephraim McDowell's historic first ovariectomy.

IRVIN ABELL, *Chairman*.

C. A. VANCE.

LOUIS FRANK.

C. C. HOWARD.

J. RICE COWAN.

SECRETARY MCCORMACK: I move the report be adopted and the appropriation of \$500 be made.

The motion was seconded and carried.

SECRETARY MCCORMACK: I would like to say that we need three more custodians in order to bring the number up to the required number, and we would be very happy to have them come from Kentucky if three of you are qualified by signing a check for \$100.

PRESIDENT GARDNER: At this time I am going to ask Dr. Louis Frank to give us the report of the Committee on Con-

trol of Cancer, acting for his son, Dr. Wallace Frank.

LOUIS FRANK, Louisville: Your Cancer Committee wishes to call to the attention of the Association that we are still seeing many far advanced cases of cancer, although the need for early medical attention and early diagnosis has been repeatedly brought to the attention not only of the medical profession but of the laity. The Woman's Field Army for the Control of Cancer has brought to the attention of the women throughout the state the importance of seeking medical advice early. It behooves us as medical practitioners to be in a position to meet this situation and to familiarize ourselves with the signs and symptoms of early cancer.

We would urge that each county medical society devote at least one meeting a year for the discussion of the common types of cancer. This can be done by a discussion of the subject among the individual members of the society, or a speaker from an adjoining county or from some of the larger medical centers could be furnished any county medical society upon their own request. In the larger county societies which hold two meetings a month it might be well to have two meetings a year devoted to the study of the more common types of cancer. By so doing, men in the various county medical societies become familiar with the early signs and symptoms of malignant disease and they will therefore be in a much better position to advise their patients.

Should such meeting be arranged for, which again we would urgedly advise, we would suggest that they may be publicized sufficiently in advance not only in the county in which the meeting is held but in the surrounding counties as well. Such advance notice will enable the members of the profession to so arrange their professional duties as to enable them to attend the proposed meeting.

Some years ago an attempt was made to have the subject of cancer presented to every county and district medical society in the State of Kentucky. The subjects discussed at that time were cancer of the mouth, skin, breast and uterus. It might be well to have these subjects again discussed before the district medical societies during the ensuing year and in addition to the list named above it also

would be well to have the subject of cancer of the lower colon and rectum included. As a rule growths in these areas make themselves manifest at a time when curative procedures can be employed. The important thing is the early diagnosis. Once a diagnosis is made the proper line of treatment can be carried out.

In conclusion, we would urge close cooperation between the members of our Association and the Women's Field Army against cancer. As the scope of their endeavor widens it will mean more individuals seeking medical advice. While enormous strides have been made especially in the radiological treatment of cancer during the past few years, the mortality of the disease still continues exceedingly high. It is only by the early recognition and the prompt institution of proper treatment that the percentage of cures will be materially increased.

L. WALLACE FRANK, *Chairman*.

I would call your attention to a chapter in the report of the Committee on Medical Economics. Speaking of cancer, the committee says: "In the light of this upward trend in cancer mortality it becomes imperative that our educational program be intensified and that adequate facilities for early diagnosis and treatment be made readily accessible both as to cost and as to distance to all the people of the commonwealth."

PRESIDENT GARDNER: Thank you, Dr. Frank. A motion to adopt the report is in order.

LOUIS FRANK: I move the adoption.

The motion was seconded by Ernest Bradley, Lexington, and carried.

SECRETARY MCCORMACK: The report Dr. Frank has just presented refers to the Woman's Field Army. Mrs. Heller, the Chairman in general command of that Field Army, is present at the meeting and has informed me that the Kiwanis Clubs of the state have joined with the Field Army and are ready to support a movement, provided it is sponsored by this Association, providing for a division of cancer control in the State Department of Health with such appropriation as can be secured from the next General Assembly.

I move you, sir, that the Association approve such legislation at this time.

The motion was seconded, put to a vote and carried.

PRESIDENT GARDNER: Next is the re-

port of the Committee on Medical Education by Dr. Oscar Bloch, Louisville.

SECRETARY McCORMACK: I have the report and I will read it:

REPORT OF COMMITTEE ON MEDICAL EDUCATION

The Committee on Medical Education desires to report that undergraduate work seems to be satisfactorily carried on at the University of Louisville.

The Committee addressed a letter to the Dean of the University and this letter and the reply thereto are attached and made a part of this report. The Committee also wrote a letter to the Association of Registered Nurses. This letter and reply thereto are attached and made a part of this report.

This Committee wishes to report that the Library of the Jefferson County Medical Society and of the University of Louisville is available to all members of the Kentucky State Medical Association and books can be taken out of the Library, with proper qualifications of the borrower.

The Committee believes that the Medical Journal of this Association should be the most potent means of post-graduate education for its members; a monthly report of clinico-pathological conferences, and a review of new books made by members selected according to their special work. The Library Committee of the above-mentioned libraries will gladly undertake the book reviewing, presenting the books reviewed to the Jefferson County Library.

Respectfully submitted,

OSCAR BLOCH, *Chairman*.

The correspondence referred to follows:

April 6, 1939.

Dr. John Moore, Dean, Medical School,
University of Louisville,
City.

Dear Dr. Moore:

The Committee on Medical Education of the Kentucky State Medical Association would like to report at the next meeting of the Medical Association upon the following:

First: Your willingness to accept a nominee by the President of the Association, to whom you will give a few hours, say three or four, for a talk to the senior students upon the subjects of medical ethics, medical economics, and relations

of physicians to the public. These hours preferably should be during the last few weeks of the senior year.

Second: The medical profession has been brought to a realization that nursing in the patient's home is inadequate and unsatisfactory. This particularly applies to rural communities where the trained nursing facilities are usually limited to the one nurse employed by the county board of health. The committee would like to report that you will accept for a short term, say there or six months, training of a limited number of women recommended to you by the President of the Society. Naturally this training will be practical, consisting of proper bathing of the patient, taking of temperatures and administration of remedies according to the orders of the physician in charge. A certain emphasis should be given to obstetrical nursing, with due care for personal cleanliness of the nurse.

Yours very truly,

OSCAR BLOCH, *Chairman*.

LOUISVILLE CITY HOSPITAL

April 27, 1939.

Dr. Oscar Bloch,
Louisville.

Dear Dr. Bloch:

I have your letter as Chairman of the Committee on Medical Education of the Kentucky State Medical Association. I will attempt to answer it according to your headings.

1. For the past two years, Dr. Arthur McCarty has been giving some 18 to 20 lectures upon medical ethics, medical economics, etc., to our senior students. This course has been outlined in our medical school catalogue.

2 and 3. I am absolutely sure that our obstetrical and orthopedic departments will be delighted to give an intensive two-week post-graduate course in fractures and obstetrical work.

4. I have had a talk with the Superintendent of Nurses concerning the training of what you apparently call practical nurses. I have been informed that this is not allowed where nurses' training schools are operating.

We have attempted for a number of years to do something in the way of post-graduate work in our hospital. We have found that clinic weeks and short courses seldom prove successful. We have long since proven to ourselves that we can

best serve the profession by bringing men back into our institution as internes who have been out of institutions say from 6 to 8 years. At the present time we have an interne on the pediatric service who graduated from our school in 1926. He will continue in this department next year as Assistant Resident.

On surgery we have three men who were out from three to six years and they intend to go on in the service. We have a doctor now serving a rotating internship who has been out eight years. Next year I am bringing back on the medical service a physician who has had a mining practice for some five years. All these men are making excellent records and I feel that when they re-enter the practice of medicine they will do all that is required of them.

Sincerely yours,
JOHN WALKER MOORE, M.D.

April 25, 1939.

Mrs. Emma Hunt Krazeise, President,
Henry Clay Hotel,
Louisville, Kentucky,
Dear Mrs. Krazeise:

As Chairman of the Committee on Medical Education of the Kentucky State Medical Association, I am writing to ask you for advice. The medical profession of the State of Kentucky has been brought to a realization that nursing in the patient's home is inadequate and unsatisfactory. This particularly applies to rural communities where the trained nursing facilities are usually limited to the one nurse employed by the county board of health. The committee would like to report that some arrangement has been made for a short course in training of worthy women, to be named by the President of the Medical Association. Naturally this training will be practical, consisting of proper bathing of the patient, taking temperatures and administration of remedies according to orders of the physician in charge. A certain emphasis should be given to obstetrical nursing, with due care for personal cleanliness of the nurse.

Could your Board take on this duty, and would there be any expense attached, and if so how much?

With best regards, I am,

Very truly yours,
OSCAR BLOCH, Chairman,
Committee of Medical Education.

THE KENTUCKY STATE ASSOCIATION
OF REGISTERED NURSES

September 1, 1939.

Dr. Oscar Bloch,
Louisville, Ky.

Dear Doctor Bloch:

In reply to your letter as chairman of a committee for the training of practical nurses, after making a thorough survey I find that the hospitals are not favorable to this type of training. The larger hospitals that could give the desired material for this training course all have training schools and, of course, they could not mix the students. Several doctors have voiced to me their opposition on this subject as they say we may bring these women into the larger centers and train them for midwives and other such purposes, but we could not make them go back to the rural communities where they came from and it would mean that the cities would be more congested than ever with people passing as trained midwives and lowering the standards that we have all worked so hard for—the care of pre-natal cases. Many of the hospital superintendents think it would be entirely too expensive and just could not be done.

Another reason, we feel that the Red Cross has taken care of this problem in training the thousands of housewives that they will send out upon request to any home where there is sickness. The Red Cross has plenty of finances and is well able to carry on this work and nurses do not feel they should enter into any plan that would be in opposition to that organization.

In reading over a copy of the JOURNAL, I saw where one doctor had asked for mediocre nurses to be trained to care for mediocre people. In sickness there are no mediocre people. If the poor man is sick, he can be as sick as the rich man, and to my way of thinking better no nurse at all than a mediocre one.

The Board of Nurse Examiners found it necessary to close some of the smaller hospitals operated by doctors for private gain, because the young ladies enrolled in them were being used for cheap labor and little or no thought given to education. After staying in these hospitals three years they were unable to pass the State Board, they were not accepted by the Red Cross or any other division of government service either in the state or nation. We think this is unfair to the

students and the schools had to be closed because they were not equipped to train student nurses.

I believe the doctors throughout the state who are in need of this type of service will find that the Red Cross housekeeping aid takes care of this problem.

Pledging our hearty cooperation for anything that is for the betterment of the health and welfare of Kentucky, I am,
Sincerely,

EMMA HUNT KRAZEISE, *President*.

Mr. President, I move the report be received and filed.

The motion was seconded and carried.

PRESIDENT GARDNER: Report of the Committee on Extension Course, D. Y. Keith, Chairman.

REPORT OF EDUCATIONAL COMMITTEE

D. Y. KEITH: Your Educational Committee, which embraces the Pediatric Post-Graduate Course, has assisted in arranging programs for nine meetings during the past year. The ones your chairman has attended and the reports we have received all have had good attendance except one. The western end of the state has not asked for assistance, though we know there have been meetings at Bowling Green, Hopkinsville, and the Southwestern Kentucky Medical Association has two meetings a year, both of which are well attended, the attendance coming from a wider territory than this district.

The Educational Committee believes, from studying programs from other states, that a greater number of doctors who do not attend meetings could be reached by announcing courses to be held at definite points and open to all members of the medical profession, even though they are not members of the Kentucky State Medical Association. This would necessarily require someone to devote considerable time, and could probably be best accomplished by having men who are real teachers to give these courses and receive remuneration for their loss of time. Until something of this character is instituted by the Councilors, the meetings that have been pursued for the past five years, that of having district or joint district meetings and the Councilors inviting men who they know will produce a good program, are to be continued.

In the districts where the Councilors

have made personal visits through their districts and talked about their meetings they have produced the best attendance and naturally the best programs. These districts show a gradual increase in attendance. We would recommend that the Councilors cultivate their districts and if they do not have the time to do this personally they should do it by correspondence.

A postgraduate course in diseases of children of ten weeks' duration has been given at the Children's Free Hospital.

Refresher courses on anemia were started in February and will continue through the fall program, under the following titles:

Anemia:

Classification.

Clinical significance.

- (a) as a problem to psychiatry.
- (b) to gynecology and obstetrics.
- (c) to pediatrics.
- (d) to surgery.

These courses are to be continued. The titles will appear in the Jefferson County program in the state JOURNAL.

Pediatric Postgraduate Course, Harlan, June 24, 1939.

Pediatric Postgraduate Course, Bardwell, August 1, 1939, as guests of the Southwestern Kentucky Medical Association.

Second District, Henderson County Medical Society as hosts, Henderson, May 31, 1939.

Fourth District, Nelson County Medical Society as hosts, Bardstown, Kentucky, June 22, 1939.

Fifth District, Carroll County Medical Society, hosts, Carrollton, May 25, 1939.

Sixth and Seventh Districts in joint meeting, Boyle County Medical Society as hosts, at Danville, June 29, 1939.

Ninth District, Boyd County Medical Society as hosts, at Ashland, May 2, 1939.

Tenth District, Lexington, May 25, 1939.

Eleventh District, Harlan County Medical Society as hosts, Harlan, May 27, 1939.

Another pediatric conference was held at Bowling Green on September 11, by Philip Barbour, Louisville.

Recommendations from any or all of

the delegates and councilors are requested.

D. Y. KEITH, *Chairman*, Louisville.

P. F. BARBOUR, Louisville.

J. S. CHAMBERS, Lexington.

H. H. HUNT, Mayfield.

Upon motion the report was approved.

PRESIDENT GARDNER: Report of the Pediatric Advisory Committee, Philip F. Barbour, Chairman.

PHILIP F. BARBOUR, Louisville: As Chairman of the Advisory Committee to the Maternal and Child Welfare Department of the State Department of Health, I beg to report that there has been very close cooperation between this committee and the Maternal and Child Welfare Department. The committee held a meeting with the Director in which certain health regulations were enacted. There have been a number of conferences between the Chairman and the Director on various problems that have arisen. Dr. Crittenden and also Dr. L. E. Smith, Executive Secretary of the Kentucky Tuberculosis Association, were present at the meeting of the state members of the American Academy of Pediatrics and gave valuable advice on certain of our problems.

Perhaps the outstanding accomplishment of the past year has been the statewide distribution of models of incubators for premature children and for the administration of oxygen. The State Department of Health through cooperation with the NYA had these models built which have been distributed to county health units throughout the state. I am advised by the Secretary of the American Academy of Pediatrics that this is the first time that such a fine health measure has been put into effect in the United States. It is believed that practitioners anywhere will be able to copy these models at very little expense and so save the lives of many premature children and those who are sick of pneumonia or other diseases needing the administration of oxygen.

I wish especially to commend the Director and the State Department of Health for their very splendid cooperation on all matters and their eagerness to do all that is possible for the women and children of our state.

Respectfully submitted,

PHILIP F. BARBOUR, *Chairman*.

Upon motion, duly seconded, the report was approved.

PRESIDENT GARDNER: You will note on the agenda there is a report of the Advisory Committee on Mental and Nervous Diseases. Those who were here this morning know that I incorporated that report in my presidential address.

Report of the Syphilis Control Committee, W. U. Rutledge, Chairman.

SECRETARY McCORMACK: I have that report.

REPORT OF COMMITTEE ON SYPHILIS CONTROL

I have the honor to make the following report on the activities of the State Department of Health in the control of venereal diseases in Kentucky:

Advancement has been made in the control of syphilis in the State of Kentucky during the past year. Great improvement has been made in reporting, which gives a better idea as to the prevalence of the disease. Every effort is being made to keep as many patients as possible in the hands of private physicians, and the public health resources of the State are placed at their disposal in handling their patients. The clinic services are being expanded to care for more patients in every locality throughout the State. Education of the public as to the cause, symptoms and dangers of the disease, and the value of early treatment, are being made available at every opportunity.

Reporting

In January, 1939, a system of morbidity reporting through means of punch cards went into effect in the State Department of Health. Medical histories of each reported case of syphilis were forwarded to the Tabulating Unit at the State Department of Health where this information was transferred into a single record by means of punch holes. This procedure facilitates obtaining any statistical and medical data by means of tabulating machines in a quick and accurate fashion. Each time a patient presents himself for treatment at any clinic or hospital, a treatment card is made out for this patient. On this card is checked off the type of therapy administered and any other service or services rendered to this case. Monthly, the treatment cards for each case of venereal disease are associated with their so-called summary medical history cards. This association

is performed mechanically, and simultaneously, a new up to date medical history card is punched incorporating all the previous data plus the treatment given this patient during the current month. Lapsing cases are immediately ascertained inasmuch as the absence of a single treatment card for any patient during the month is an indication of absence from treatment. Various reports are prepared for the county health officers and the Division of Communicable Diseases of the State Department of Health, for better administrative control and follow-up of venereal disease cases, primarily, lapsing infectious cases. All of these reports are prepared automatically on electric tabulating machines and offer one of the latest developments in Kentucky's fight against venereal diseases.

This project has been made possible through the cooperation of the Works Progress Administration, the State Department of Health, and the United States Public Health Service, and will be available to furnish information to private physicians who request use of this service.

Laboratory Service

In the State Department of Health Laboratory at Louisville, Kahn tests are being run routinely on all serology. A weekly check on the efficiency of this laboratory is being continued. Each week a portion of a series of blood specimens are sent to the United States Public Health Service Serological Research Laboratory, Staten Island, New York, and another portion of the same series of specimens are done by the State Department of Health laboratory in Louisville, which makes it possible for us to evaluate both the specificity and sensitivity of the tests being run in the State Department of Health laboratory. During the past year, we have agreed 100% in specificity and sensitivity has been very high. The laboratory now runs on an average of 500 blood specimens a day and is under the supervision of well-trained technicians. During the past year there were 91,076 serological blood tests performed in the State Department of Health laboratory.

Darkfield equipment for the examination of suspicious lesions is available in the Louisville laboratory, in the McCracken County Health Department at Paducah, in the Hopkins County Health Department at Madisonville, in the Fay-

ette County Health Department at Lexington and in the Boyd County Health Department at Ashland. This service will be extended as funds are available.

Facilities for the bacteriological diagnosis of gonorrhea are available in the above mentioned county health departments and various other laboratories throughout the State.

Epidemiology

In the control of venereal disease, epidemiology plays an important part, for it is by systematic effort that we can ascertain sources of infection and bring under observation, for diagnosis and treatment, contacts of known cases. Efforts have been made, by use of the morbidity tabulating system reports which give information as to the number of lapsing cases in any one month in any clinic using this system, to bring these patients under treatment. In 1937, reported for the first time as new cases of syphilis, the total number was 5,671 and in 1938, the total was 9,499, showing that there is better reporting and also better epidemiology being done throughout the State. When compared with 1930 when there were only 680 new cases reported for the first time, one can readily see the advancement made in this short period.

It is possible, in any county with a full time health department, for a physician to request, the service of a county health nurse to investigate the source of infection and contacts of any or all of his cases. These contacts are referred to him for observation, diagnosis and treatment unless he requests that they be followed up at the health department clinic.

Consultation Service

On duty at the State Department of Health is a physician loaned to the State of Kentucky by the United States Public Health Service, who is well trained in venereal disease control. Also available for consultation service is the director of the Bureau of Venereal Diseases of the State Department of Health of Kentucky. Physicians of the State of Kentucky may make use of this service at any time.

Drugs

It is now possible for physicians treating indigents and semi-indigents to receive drugs free of charge upon request to the county health officer in those counties with a full time health unit, and in those counties where there is no full time health unit, direct application to the Bu-

reau of Venereal Diseases at the State Department of Health, may be made. In return, the physicians are asked to furnish statistical data which helps to ascertain our present problem, and in turn, this information is passed on to the United States Public Health Service in Washington to add to the data from the nation as a whole.

It is still to be emphasized that by minimum treatment is meant not less than twenty injections of an arsenical and twenty injections of a heavy metal continuously, without rest or interruption, to all cases of primary and secondary syphilis. The resources of the State Department of Health are not adequate to supply free drugs for the treatment of all cases of syphilis and gonorrhea, but only to indigents and semi-indigents in the infectious stages. However, it is felt that this measure should never become necessary as long as properly trained private physicians are available to treat patients for these diseases.

Clinics

Records whereby transferring of patients from one clinic to another can be facilitated, and information as to whether or not this patient is being kept under treatment are available. This information is also sent to clinic directors and physicians by the reports of the morbidity tabulating system. Arrangements are still in effect with the City Hospital of Louisville to hospitalize for as long a period as necessary, all venereal disease cases who require special study and those cases whom it may be deemed advisable to hospitalize during treatment of the infectious period of the disease. It is hoped that similar arrangements can be made with additional hospitals throughout the State.

No patients, unless they are open law violators, such as recalcitrant prostitutes, are accepted in public health clinics without being referred by private physicians. When a patient is referred to a clinic by a private physician, he is induced to stay under treatment, by persuasion or by force, until the treatment given is such as felt to insure that he will not suffer an infectious relapse or possibly spread this disease to others.

Prenatal cases are given as much treatment as the time of their discovery will permit. Effort is being made to discover these cases before the fifth month of pregnancy, and to get in at least 10

arsenicals and 10 heavy metals before delivery. Every effort is made to have their treatment appropriately continued and they are urged to be kept under observation and be given treatment during each successive pregnancy. Effort is always made to keep these patients under the care of the physician who delivered them; the health department contributes drugs, laboratory service, home visiting and consultation. The children of these patients should be kept under constant scrutiny during the first year of their lives for evidences of congenital syphilis, and thereafter, an effort should be made to check them once a year until they are seven years of age.

Pre-Marital Law

The Pre-Marital Law, which becomes effective March 1, 1940, provides that every person making application for license to marry shall, at any time within 15 days prior to such application, be examined as to the existence or non-existence of any venereal disease; and it shall be unlawful for the County Clerk of any county to issue a license to marry to any person who shall have failed to present and file with such County Clerk a certificate setting forth that such person is free from any venereal disease. This examination requires that, in addition to a physical examination, a recognized blood test on a blood specimen from each of the contracting parties shall be done for the serologic diagnosis of syphilis, and where indicated, a darkfield examination of existing lesions, together with a smear for microscopic study for gonorrhea will be made. The physician's certificate of freedom from venereal disease must be furnished to the County Court Clerk before the license can be issued. The only exceptions to this requirement are that in the case where pregnancy exists, or where known sterility exists in one or both applicants, the County Judge, by special provision may provide for the marriage. In either case, the Judge must require infected persons to be treated.

During the past year there were 50,020 marriages in the State of Kentucky. This means that over one hundred thousand people marry each year and it is anticipated that with the enactment of this law much congenital syphilis and also infection of the marital partners can be prevented in our State. In States where the marital law has been in effect for a

year or longer, it has been found that from one to two per cent of all people applying for marriage licenses were infected with syphilis that could be passed on to the marital partners and unborn children. It is strongly urged that the physicians throughout the State will help to educate the public as to the necessity of this law, the results expected from it and the purpose that it will accomplish.

The necessity of a prenatal law is evident in the State of Kentucky when we realize that in 1938 there were 2,070 still births and in the year preceding there were 1,861. A large portion of these were due to syphilis. When it is known that if a pregnant woman begins treatment even as late as the fifth month of pregnancy, almost always the child will be born free of syphilis, it is not too much to hope that in the near future we may have a prenatal law, and in conjunction with the pre-marital law, both will be the means of finally eradicating syphilis in the State of Kentucky.

Respectfully submitted,

WINSTON U. RUTLEDGE, *Chairman.*

ERNEST BRADLEY, Lexington: I move the adoption of the report.

The motion was seconded and carried.

SECRETARY MCCORMACK: The State Federation of Women's Clubs has made one of their purposes at the next session of the state legislature the passage of a model prenatal examination law, and they have asked that this Association approve of that action on their part. This law has been adopted now in about eighteen states and will rapidly be adopted in the other states. I move the approval.

LOUIS FRANK, Louisville: Has not the law been repealed in one of the States?

SECRETARY MCCORMACK: It was repealed in one state.

JOHN W. SCOTT, Lexington: Is it now the law?

SECRETARY MCCORMACK: No. That is the pre-marital examination law. This other is the pre-natal examination.

LOUIS FRANK: Do you believe that examination within fifteen days preceding marriage is a very sure way of eradicating syphilis?

SECRETARY MCCORMACK: There isn't any sure way, but you get about two per cent of the people who would otherwise marry, treated before they marry.

LOUIS FRANK: A lot of them go out on a spree just a few days before marriage.

SECRETARY MCCORMACK: That may be

true, but getting two per cent of 100,000 people would be 2,000 people. We won't get all of them.

JOHN W. SCOTT, Lexington: It is rather out of place after the law has already passed, but isn't it a fact that a great many, perhaps a majority of the men who are specialists in syphilis and in gynecology oppose this law and think it is futile?

SECRETARY MCCORMACK: No.

J. W. SCOTT: I know a good many of them do.

SECRETARY MCCORMACK: The Advisory Committee, which consists of probably two-thirds of the men who limit themselves to that specialty, recommend to this Association that it approve the law, and appeared for it at the hearing before the legislature. There wasn't a single line of opposition from anybody that I heard except the county clerks.

LOUIS FRANK: Does this provide for pre-natal examinations?

SECRETARY MCCORMACK: Pre-natal examinations. That hasn't been passed and there has been no objection to that in any of the states where it has been passed.

S. C. SMITH, Ashland: I move this society go on record as approving the action of the Kentucky Federation of Women's Clubs in sponsoring this bill.

The motion was seconded and carried.

PRESIDENT GARDNER: Report of the Committee on Military Medicine and Medical Veterans' Affairs, S. C. Smith, Chairman.

S. C. SMITH, Ashland: Up to now the report of this committee has been considered of little importance. With the advent of the European war, with our experience in 1917, it seems to me that this assumes a new importance. We want to stay out of the war and we are going to if we can do so honorably, but just in case we should get in, I think we should have all of our doctors who are willing secure their reserve commissions, all those who are eligible and willing. I should say, and receive all training possible as soon as possible, consistent with carrying on their work, so that lost motion, lost time and misplaced talents of the last war will not again occur. Those of us who were in that war remember many of the things that took place which we considered a great loss of time, and also the number of men whose talents were considerably misplaced while they were in the service was regrettable. I recall one fellow at

Fort Riley, Kansas, who refused to volunteer. He was drafted and had to do squads right and left over there with a rifle, he went in with the other buck privates and it was three months before he could get transferred to the Medical Corps. That may happen again if we should get into the war. While there are a number of young doctors in Kentucky who already hold commissions either in the Army or the Navy Reserve, there are many who do not, and I think for their own future welfare in case we should get into war, it would be better for them to secure their reserve commissions as early as possible and, if given an opportunity, take two weeks' training a year.

PRESIDENT GARDNER: You have heard Dr. Smith's report.

C. A. VANCE, Lexington: I move its adoption.

The motion was seconded and carried.

PRESIDENT GARDNER: The next and last report is that of the Committee on Miscellaneous Business, after which Dr. Abell would like to say a word about the death of the Drs. Mayo. It seems that Dr. York is not present. That concludes the reports of committees. Dr. Abell, we will be glad to hear from you.

IRVIN ABELL, Louisville: Since our last meeting two of the most distinguished of our honorary members have died, Dr. Charles Mayo and Dr. Will Mayo. Both of them have been on our program and have sent many representatives from their clinic to contribute to our programs. I should like to offer a motion that the officers of this body draw up appropriate resolutions upon their death, expressing our appreciation of their contributions to medicine and their work as men, and conveying to the families our sympathy.

LOUIS FRANK, Louisville: I amend it to be adopted by a rising vote.

The motion was unanimously carried by a rising vote.

SECRETARY MCCORMACK: I would like to move you that as this is the last session of the House of Delegates over which our present President will preside, we extend to him our affection and our gratitude for his constant courtesy and the efficient manner in which he has conducted his high office, and our best wishes for his continued success in the field in which he has made such notable contributions. (Applause.)

The motion was seconded by many delegates and carried by a rising vote.

PRESIDENT GARDNER: Thank you.

A motion to adjourn is in order.

Upon motion regularly made, seconded and carried, the House of Delegates adjourned at 10:05 P.M., until Thursday morning, September 14, at 8:00 A.M.

THURSDAY MORNING SESSION

September 14, 1939

The final session of the House of Delegates convened at 8:05 A.M., President John W. Scott, Lexington, presiding.

PRESIDENT SCOTT: The first order of business is the roll call.

The Secretary called the roll.

SECRETARY MCCORMACK: Mr. President, 66 members answered their names and a quorum is present.

PRESIDENT SCOTT: The Secretary announces that a quorum is present.

The next order of business is the final report of the Committee on Credentials.

H. H. HAGAN, Louisville: Mr. Chairman, the Committee on Credentials reports that the credentials are all turned in.

PRESIDENT SCOTT: That will be accepted as the roll of the House.

The next order of business is the final tion of officers. The first officer to be elected is the President-elect, and nominations will be made as the counties are called. Mr. Secretary, will you call the counties?

The Secretary called the roll of counties.

C. C. TURNER, Barren County: Mr. Chairman, I would like to nominate Austin Bell as President-elect.

T. A. FRAZER, Marion: I rise to second the nomination of Austin Bell. I would like to say just a few words about Dr. Bell. I have known him for many long years and I know he is one of the highest type of gentlemen in the State of Kentucky, one of the best physicians in the State of Kentucky. He is brave as a lion and gentle as a lamb. He is a man that we may honor, yet he will honor us as President of the Kentucky State Medical Association.

W. S. SANDBACH, Pembroke: Being from the County of Christian, I have known Dr. Bell since I have been practicing medicine. Nothing can be said of Dr. Bell that isn't splendid. You will find him in the front ranks of everything that is right, and if you elect him Presi-

dent of this society you will have nothing to regret. I could say many other things about Dr. Bell, but being limited to one minute I will say that I will thank you for your vote for Dr. Bell as President-elect. He is the Western Kentucky candidate for President.

PRESIDENT SCOTT: Are there further nominations?

JAMES R. STITES, Louisville: I move the nominations be closed, and that the Secretary cast the ballot.

The motion was seconded and carried unanimously.

SECRETARY MCCORMACK: Mr. President, I have pleasure in casting the secret ballot.

PRESIDENT SCOTT: The secret ballot indicates that the Secretary has voted for the nominee, Dr. Bell. I will appoint Dr. Sandbach and Dr. Turner a committee of two to find Dr. Bell and bring him to the House.

Three Vice-Presidents are to be elected, and either by law or custom they are elected from the three sections of the state, one from the East, one from the West, and one from Louisville. Nominations are in order.

C. A. VANCE, Lexington: Mr. President, I would like to nominate for Vice-President George Gregory, of Versailles, from our District.

PRESIDENT SCOTT: Dr. Gregory is not a delegate, I believe?

C. A. VANCE: No, sir.

The nomination was seconded by George Wilson, Lexington.

JAMES R. STITES, Louisville: I would like to place in nomination from Louisville the name of A. Clayton McCarty, for Vice-President.

The nomination was seconded.

J. H. BLACKBURN, Bowling Green: I would like to place in nomination Eldon W. Stone, of Bowling Green, from Western Kentucky.

ERNEST BRADLEY, Lexington: I move the nominations close and the Secretary be instructed to cast one ballot for these nominees.

The motion was seconded and carried and the Secretary cast the ballot.

PRESIDENT SCOTT: G. H. Gregory, A. Clayton McCarty, and Eldon W. Stone have been elected.

Next in order is the election of a Delegate to the American Medical Association.

CHARLES W. HIBBITT, Louisville: I

want to place in nomination a gentleman who has served us well. I want to present the name of Dr. Virgil E. Simpson for reelection as Delegate. The Louisville delegation unanimously present his name.

The nomination was seconded.

E. B. WILLINGHAM, Paducah: I would like to place in nomination a man who will grace that position. I would like to mention the name of Dr. C. C. Howard, of Glasgow, as candidate for Delegate.

H. H. HUNT, Mayfield: I second the nomination.

CHARLES N. KAVANAUGH, Lexington: I second Dr. Simpson's nomination.

PRESIDENT SCOTT: Are there any other nominations? If there are no others, tellers will be appointed, and I will appoint Dr. Wilson and Dr. Kavanaugh as tellers.

C. C. TURNER, Glasgow: Gentlemen, your President-elect, Dr. Austin Bell, of Hopkinsville. (Applause.)

PRESIDENT SCOTT: Gentlemen of the House, I have the very great pleasure of presenting to you as President-elect of this Association, Dr. Austin Bell, of Hopkinsville.

AUSTIN BELL, Hopkinsville: Sometime ago one of our prominent Rotarians, an ex-President of the Rotary Club, made the statement that he had a very prominent friend whom he wanted to come down and make a speech. He was expected to come at a certain time. On the day before he was to come a local paper had a good deal to say about it. The day he was to arrive they expected him by airplane and the paper had a good deal to say about that. When the time came, he failed to put in his appearance, and this man had said so much that he was considerably embarrassed. When he stood up before the Rotary Club he said, "Am I embarrassed?" and his face told the tale. That to a certain extent illustrates my own feeling at the present time.

As a small boy I lived in the country, and all of my early educational advantages, if you call them advantages, were gained there. I recall the school to which I went was a single log schoolhouse. It was succeeded in a number of years by the little red schoolhouse of which we read so much. At the school they had the custom of having the different boys say a speech every Friday afternoon, and each Friday I would break down and cry and I would have to take my seat. At the end of the session I made one speech

without crying and I secured a prize for that. So you can understand readily I am not a public speaker, I didn't start out with any adaptability along that line, and as time has gone on I haven't gained any.

I do appreciate greatly the honor that you have given me today. It is very gratifying, I assure you, and a very gracious deed on your part. However, I have always thought that this body of men was composed of very fine men with wonderful judgment, but since a little while ago I have begun to question whether or not that is true, and I am afraid I don't view you in the same light I have in the past, since you have overlooked so many splendid men and accepted a small-town boy as President-elect.

All of us are deeply interested in medical issues and we recognize the fact that in days to come there are many things which will confront the medical profession which will require the united wisdom and effort of all concerned. We in Kentucky have been peculiarly fortunate in that we have many good leaders. Our own Dr. Irvin Abell has led the fight for the nation as well as the state. Certainly we are glad to fall in behind him and increase in any way we can the efforts in favor of organized medicine.

The officials of a club or a society mean comparatively little, but the organized medical profession with any set of officials can work wonders.

I certainly appreciate the honor you have conferred upon me at this time. I feel if we take our state motto and live up to it in medical work we certainly can do anything that we set out to do. The spectre of socialized medicine stares us in the face and we must accept some changes if we expect the laity to accept our teachings and our ideals. We must face the issues squarely, we must realize that a certain number of our people are not cared for as they should be and as we would like to have them cared for, and it is up to us as the protectors of the state's health to make certain changes and to make certain advances by which all of our people are cared for.

Again I thank you for the signal honor you have bestowed upon me. (Applause.)

PRESIDENT SCOTT: Has everybody voted who has a right to vote on Delegate to the American Medical Association?

Dr. Simpson has received 31 votes and Dr. Howard has received 30 votes. Dr. Simpson is elected Delegate to the American Medical Association.

The next order of business is the election of an Orator in Surgery. Do I hear a nomination?

SECRETARY McCORMACK: The Orator in Surgery this time would come from the state some place outside of Louisville.

LOUIS FRANK, Louisville: I believe I have the privilege of the floor?

SECRETARY McCORMACK: You have the privilege of the floor but you can't make a nomination.

JAMES A. ORR, Paris: I would like to place in nomination for Orator in Surgery one of the younger men who has been doing surgery in our section of the state and has made a name for himself, Dr. Allen E. Grimes, of Lexington.

PRESIDENT SCOTT: Dr. Grimes has been nominated.

ERNEST BRADLEY, Lexington: I second Dr. Grimes' nomination.

PRESIDENT SCOTT: Are there any other nominations?

W. B. ATKINSON, Campbellsville: I move you that the nominations cease and the Secretary cast the ballot of the House.

The motion was seconded and carried and the Secretary cast the ballot.

PRESIDENT SCOTT: The Secretary has cast the ballot for Dr. Grimes, who is elected Orator in Surgery.

Next is Orator in Medicine.

H. H. HAGAN, Louisville: I have the honor, on behalf of the Jefferson County delegation, to present the name of Dr. Oscar O. Miller as Orator in Medicine.

The nomination was seconded by T. A. Frazer, Marion.

PRESIDENT SCOTT: Are there other nominations?

S. C. SMITH, Ashland: I move the nominations close and the Secretary cast the ballot.

The motion was seconded and carried and the Secretary cast the ballot.

PRESIDENT SCOTT: The Secretary casts the ballot of the House for Dr. Miller, who is elected Orator in Medicine.

Councilor for the Fifth District. Nominations are in order, J. B. Lukins having held that office.

H. K. BUTTERMORE, Liggett: I nominate J. B. Lukins to succeed himself.

The nomination was seconded by J. I. Greenwell, New Haven, and S. C. Smith, Ashland.

S. C. SMITH, Ashland: I move the ballot be closed and the Secretary be instructed to cast the ballot of the House.

The motion was seconded and carried and the Secretary cast the ballot.

PRESIDENT SCOTT: The Secretary casts the ballot of the House for Councilor for the Fifth District for Dr. Lukins.

Nominations are in order now for Councilor for the Eighth District, Dr. Hafer having resigned, and Dr. Luther Bach was elected by the House of Delegates ad interim.

W. B. ATKINSON, Campbellsville: I would move you that Dr. Luther Bach be elected for the unexpired term of Dr. Hafer.

The motion was seconded.

S. C. SMITH, Ashland: I move the nominations be closed and the Secretary be instructed to cast the ballot.

The motion was seconded and carried and the Secretary cast the ballot.

PRESIDENT SCOTT: The Secretary has cast the ballot of the House for Dr. Bach, who is therefore elected for the unexpired term of Dr. Hafer.

Next to be elected is a Councilor for the Ninth District; Dr. Sparks is now the incumbent.

S. C. SMITH, Ashland: I would like to nominate Proctor Sparks to succeed himself.

The nomination was seconded by several delegates.

SECRETARY MCCORMACK: I move that the Secretary be allowed to cast the ballot of the House for the nominee.

E. M. HOWARD, Harlan: I second that. The motion was carried.

SECRETARY MCCORMACK: Complying with the instructions of the House, I cast the ballot of the House for Councilor of the Ninth District.

PRESIDENT SCOTT: The Secretary takes advantage of the privilege which has been granted to him and casts the ballot of the House for Dr. Sparks, who will succeed himself as Councilor of the Ninth District. This is one of the few times the Secretary is allowed to do something with the House's permission. (Laughter.)

Nominations for Eleventh District.

W. R. PARKS, Harlan: I wish to place in nomination the name of Dr. Buttermore to succeed himself. He has served the District well and has served the State Association well.

S. C. SMITH, Ashland: I second the nomination.

ERNEST BRADLEY, Lexington: I move we allow the Secretary to cast another ballot of the House.

SAMUEL B. MARKS, Lexington: I second the motion.

PRESIDENT SCOTT: This extraordinary privilege is proposed for the Secretary again. All in favor of allowing the Secretary again to cast the ballot of the House for Councilor in this case for the Eleventh District will signify by saying 'aye,' opposed 'no.' It is carried.

SECRETARY MCCORMACK: I can't cast the ballot again because I haven't done it before, but I have the very distinguished honor to cast the ballot of the House for the Councilor for the 11th District to succeed Dr. H. K. Buttermore.

PRESIDENT SCOTT: The Secretary has again cast the ballot of the House for a Councilor, in this case for Dr. Buttermore for the 11th District, and he is now elected.

Nominations for Treasurer are in order.

SECRETARY MCCORMACK: Dr. Davis was elected as Treasurer until this election, with the recommendation by the Council that he be elected as Treasurer to fill the unexpired term of Dr. McDowell, which will expire at the 1943 session.

S. C. SMITH, Ashland: I would like to place the name of A. W. Davis, Madisonville, in nomination as Treasurer of the Association and recommend that the Association require him to put up a heavy bond for the performance of his duty.

SECRETARY MCCORMACK: It has already been done.

T. A. FRAZER, Marion: If there be no objection, I move that the nominations close and Dr. Davis be elected Treasurer by the Secretary casting the ballot.

PRESIDENT SCOTT: We will trust the Secretary.

SECRETARY MCCORMACK: I can't be instructed as to whom the ballot is to be cast for.

PRESIDENT SCOTT: Dr. Frazer moves that the Secretary cast the ballot of the House for Treasurer.

The motion was seconded and carried and the Secretary cast the ballot.

PRESIDENT SCOTT: The Secretary casts the ballot of the House for Dr. Davis, who is now elected to fill the unexpired term of Dr. McDowell, as Treasurer of the Association.

The next order of business is the selection of the place of meeting.

ERNEST BRADLEY, Lexington: Dr. Kavanaugh, who is the senior delegate, should issue this invitation, but he has asked me to do so. The Fayette County Medical Society at a meeting some months ago instructed the Delegates to invite the Kentucky State Medical Association to meet in Lexington next year. We haven't met in Lexington for nine or ten years, and we should be very glad indeed to have you come there. We will try to give you as good a meeting as you have had in Bowling Green. We will try, if we can, to keep the temperature 10 or 15 degrees below that which you have experienced here. We will not make that an absolute guarantee, but we will do the best we can.

S. C. SMITH, Ashland: It has been 19 years since Ashland had the state meeting. I would like to meet in Lexington; I think it is one of the finest cities in the country, but we feel Ashland is entitled to entertain the Kentucky State Medical Association after 19 years. I therefore extend an invitation for the next meeting to be held in Ashland.

PRESIDENT SCOTT: Are there any other invitations?

SECRETARY MCCORMACK: I have always been of a compromising turn of mind, and with the great metropolises of the state, Ashland and Lexington, in competition, I know the rivalry will be so keen and acute that there is apt to be feeling between these two sections, and I therefore nominate the city of Morehead as a compromise, just halfway between the two. The Rowan County Medical Society has invited you, and through the President of the State Teachers College there you have an invitation. This is a vale of humility between the two mountains of grandeur, Lexington and Ashland. Really, as a matter of fact, I think we could have a wonderful meeting at Morehead. They have ample accommodations for us, they will take good care of us, and we wouldn't do anything but go to the meeting. There would be no distractions in the way of race tracks or race horses or rivers or anything else. The only thing they ever had to change the even tenor of their ways was an occasional flood and a rare feud.

T. A. FRAZER, Marion: I would like for someone to guarantee that Morehead wouldn't have a flood while we were there.

PRESIDENT SCOTT: That is certainly against it. The chair has no right to have any preference in this matter, but we don't have floods in Lexington; they do in Ashland and Morehead, I'm sure of that.

ERNEST BRADLEY, Lexington: We would like to correct a misimpression about the races. We will promise that during the time the Kentucky State Medical Association meets in Lexington we won't have any races. We would much rather have the races there, and you would too, but the hotels are not so favorable toward having the medical society and the races at the same time, so we will try not to have anything at all to interfere with your attendance at meetings.

J. B. LUKINS, Louisville: If we meet in Lexington would it have to be this early in September?

ERNEST BRADLEY, Lexington: I don't think so. We would have to meet at a time when the races or the trot is not going on. I think we could meet probably two weeks later than this. Our idea was not to have the meeting at the University but at one of the hotels.

S. C. SMITH, Ashland: Rather than have the meeting at Morehead in July, August or September, I withdraw Ashland's application in favor of Lexington.

SECRETARY MCCORMACK: As long as this spirit of good feeling exists, I move you that the Secretary be permitted to cast the ballot of the House for the next place of meeting.

PRESIDENT SCOTT: The Secretary again asks permission of the House to cast the ballot for the place of meeting and has withdrawn Morehead, I believe, so there is only one place that is in order, and that is Lexington.

PRESIDENT SCOTT: Those in favor of allowing the Secretary to select the place of meeting will say "aye," those opposed "no." It is carried.

SECRETARY MCCORMACK: As the agent of the House I rather resent the implication that there is but one place to vote for, but I cast the ballot of the House in accordance with the instructions.

PRESIDENT SCOTT: The vote is for Lexington, so Lexington will be the next place of meeting.

SECRETARY MCCORMACK: Mr. President, acting under instructions from the General Session, I have the very distinct honor of presenting Dr. Roger Irving Lee,

of Boston, for honorary membership to succeed in the vacancy created by the death of Dr. William J. Mayo.

Dr. Lee is one of the most distinguished general practitioners of medicine in the United States. To say that he is a Fellow of Harvard University and a Trustee of the American Medical Association indicates to the thoughtful that he is one of the men who is helping to guide the intellectual and professional destinies of the United States.

Seconded by several and elected unanimously by a rising vote.

The appointment of permanent committees will be done later.

Unfinished business.

J. D. NORTHCUTT, Covington: Am I in order to offer a resolution before the House?

PRESIDENT SCOTT: If it is unfinished business?

J. D. NORTHCUTT: It is unfinished business. It appears to me, after hearing the opinion of quite a few men here, that we are hardly in a position to settle matters that come before us from an economic standpoint, and it has been suggested that some resolution be offered to give a little more elasticity to handling this situation. I therefore offer this resolution:

"Be it resolved. That a committee of five be appointed to review the Constitution and By-Laws of this society and recommend such changes that will better enable this Association to deal with the changing economic conditions, present and anticipated, and that this committee have the recommendations printed and presented at our next meeting, or earlier if circumstances demand."

PRESIDENT SCOTT: Do you mean to a called meeting?

J. D. NORTHCUTT: The next meeting of the Delegates.

CHARLES W. HIBBITT, Louisville: To bring it before the House I will second it.

PRESIDENT SCOTT: I think there is some point of order there. However, since this is in direct relation to the report of the Committee on Medical Economics, which was left somewhat in the air by reason of the fact that only a part of that report was accented, it seems to me that it is in order to consider at least this resolution that has been offered by Dr. Northcutt.

W. R. PARKS, Harlan: I rise to a point of information. I would like to have Dr.

Northcutt reread his resolution, so we will all understand it.

PRESIDENT SCOTT: Will the Secretary read Dr. Northcutt's resolution?

The Secretary reread the resolution.

PRESIDENT SCOTT: I think that might be worded a little better. For instance, it says, "Circumstances demand." Who would determine if the circumstances demand? In the committee's judgment or in the President's judgment, or what? I presume that meant a called meeting of the House of Delegates, because it would have to report to the House of Delegates. Who is to determine the circumstances which demand it?

J. D. NORTHCUTT: The Committee.

SECRETARY MCCORMACK: You can't amend the Constitution except at a regular annual meeting after a year's notice.

J. D. NORTHCUTT: It doesn't call for an amendment; it calls for a report of the committee.

SECRETARY MCCORMACK: But it can't be considered even until a year after the next annual meeting.

PRESIDENT SCOTT: I think those are matters of detail. What Dr. McCormack says, of course, is correct, that it couldn't even begin to lie on the table until the next meeting of the House of Delegates.

J. D. NORTHCUTT: I am quite sure that the intent of this resolution meets with the approval of every physician here, and if it is necessary that the Constitution of the American Medical Association be changed before we can have a change in our own Constitution and By-Laws, which is about 40 or 50 years old, then we are in bad shape.

SECRETARY MCCORMACK: I didn't say that.

J. D. NORTHCUTT: I think we need a little more flexibility. I would like to have it discussed. You can defeat it if you care to, but I would like to have it discussed.

GEORGE WILSON, Lexington: I don't understand it. What is it all about?

ERNEST BRADLEY, Lexington: Maybe Dr. Northcutt can explain in what manner it is necessary to change it, for what reason. I don't understand it. It may be that we don't understand why the American Medical Association amended theirs, but maybe Dr. Northcutt can tell us why it is necessary to amend it. Be specific, Dr. Northcutt; tell the men why it has to be amended, to do what?

J. D. NORTHCUTT: The resolution

doesn't say that it should be. It says it should be reviewed and studied and such changes recommended as might be needed for any handling of funds that might come into this society for distribution. That is where the trouble hinged the other day, it occurred to me. Now after it is generally discussed if the resolution is not passed, O. K., they have had a chance to amend some of the faults they have found.

E. M. HOWARD, Harlan: It occurs to me that this is a democratic body and that we should give Dr. Northcutt's resolution serious consideration. I don't know what Dr. Northcutt is driving at, but if we are going to function as a wholehearted democratic body let's pass this resolution. Dr. Northcutt is not recommending any changes: he is recommending a review, and if he feels that way about it I think he should have a review of the Constitution and By-Laws by a competent committee to report to this House of Delegates, which has the final say about whether we will have a change or whether we will not.

I will second the resolution and recommend that we have a committee.

PRESIDENT SCOTT: It has been seconded. You speak in favor of it, do you?

E. M. HOWARD: Just a review of the Constitution.

T. A. FRAZER, Marion: I don't see any reason why we shouldn't favor Dr. Northcutt's resolution. I don't see any harm in appointing a committee to study this and report back to us next year. With a committee appointed to study these questions, they might bring out things that we haven't thought of. I don't see any reason why we shouldn't have this resolution passed. The President appoints the committee and those men will study the matter, and therefore I am in favor of the resolution.

PRESIDENT SCOTT: Is there any further discussion?

The question was called for.

PRESIDENT SCOTT: To sum the thing up, to give what I conceive as Dr. Northcutt's idea, as I see it, is that there was considerable discussion and difficulty in the minds of the House in regard to action on the report of the Medical Economics Committee. We are facing a situation which was not contemplated when the present Constitution was drawn, something like thirty-five years

ago, and he thinks that a survey of the situation in connection with the Constitution to see whether or not it fits the situation or does not fit the situation is in order, and if it does not fit the situation the committee will recommend such changes as in their idea would make it fit the situation. That to me is the purpose of Dr. Northcutt's motion. Is that a fair statement of it?

J. D. NORTHCUTT: Exactly.

PRESIDENT SCOTT: I would like to say one thing for your information, that in the opinion of the chair that committee could not consider or report to this House anything except in relation to the Constitution as it affects the report of the Medical Economics Committee. It could not take a broad general view of any troubles that it thought existed in the Kentucky Medical Association, but would only be limited to this, because this is only on unfinished business, and therefore only unfinished business can be considered by the committee appointed.

After further discussion.

PRESIDENT SCOTT: If you have finished the discussion I think we will put the question. All those in favor of this resolution will indicate by saying "aye," those opposed "no." Do you want a division? The "ayes" seem to have it. Is there any question? If you want a division ask for it, otherwise I will say the "ayes" have it. The "ayes" have it, the motion is passed.

I will name a committee of five, which seems to be the best opinion of the House, and I will take that under consideration. I want to assure the House that this committee is not going to be composed of people who have been—well, you would be surprised at some of the nominations I will make on that committee, because I am not going to nominate people who have been outspokenly critics of the administration, nor am I going to appoint people who are strong supporters of the administration. I am going to appoint people, whether they have been active in this House or not, who in my opinion have good judgment and can give us a valuable opinion. (Applause.) I think you are going to criticise my appointments, but that is the way they are going to be.

SECRETARY MCCORMACK: I have here a report of the Committee on Hospitals: Your Committee on Hospital Standard-

ization in Kentucky recommends the following:

First: The State Department of Health make a sanitary survey of hospitals in the State of Kentucky.

Second: The Committee on Public Relations be instructed to draft a statute providing for a Division of Hospitals in the Bureau of Medical Service in the State Department of Health, for the purpose of standardizing hospitals and providing for the training of nurses in the smaller hospitals in the state.

W. L. TYLER, *Chairman.*

U. G. BRUMMETT.

S. C. SMITH, Ashland: I move the report be accepted. The motion was seconded.

PRESIDENT SCOTT: Is there any discussion?

The question was called for and the motion was carried.

SECRETARY McCORMACK: I would like to present to you our distinguished guest from Pennsylvania, Dr. Donald Guthrie, son of one of the great men who helped to reconstruct the American Medical Association, and he himself one of the distinguished leaders of probably the greatest of the state medical organizations.

CHAIRMAN VANCE: The Council reports the following accounts, and I move that they be paid. Carried:

1939	
Sept. 1—Voucher Check No. 1	\$ 1,000.00
A. T. McCORMACK, M.D., Louisville	
To reimbursement for rent on building located at 620 S. Third St., Louisville:	
Payment on principal of note due 9-1-40	\$ 337.01
Interest to 9-1-39	662.99
	<hr/>
	\$ 1,000.00
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 1—Voucher Check No. 2	55.00
MILDRED SHIPPER, Louisville	
To 1 month's services assisting with medical economics study	
Approved by Council and Ordered Paid by House of Delegates.	55.00
Sept. 15—Voucher Check No. 3	14.74
CHARLES A. VANCE, M.D., Lexington	
To reimbursement for long distance calls and telegrams regarding arrangements for McDowell Dedication (McDowell Fund Expense)	
Approved by Council and Ordered Paid by House of Delegates.	14.74
Sept. 15—Voucher Check No. 4	49.46
PHILIP F. BARBOUR, M.D., Louisville	
To expense of trip to Harlan for self	
To expense of trip to Bardwell for Dr. Lee Palmer and self	16.91
(For Pediatric Meetings)	32.55
	<hr/>
	49.46
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 15—Voucher Check No. 5	1.45
MALCOLM H. OWEN, Louisville	
To reimbursement for materials used in making display case for knocker for McDowell Home (McDowell Fund Expense)	
Approved by Council and Ordered Paid by House of Delegates.	1.45
Sept. 15—Voucher Check No. 6	2.50
LEE HAMILTON, Attorney, Louisville	
To reimbursement for recording deed from Nash Raum and wife (purchase of Apothecary Shop) (McDowell Fund Expense)	
Approved by Council and Ordered Paid by House of Delegates.	2.50
Sept. 15—Voucher Check No. 7	50.00
JUDGE REX LOGAN, P.M., Bowling Green	
To postage for journal	
Approved by Council and Ordered Paid by House of Delegates.	50.00

that of the State of Pennsylvania. Dr. Guthrie in his own right is a great surgeon, and it will be a great privilege, I know, for all of you to hear him this morning when he presents his subject before the general session, which will be in session immediately.

I would like to call your attention to the fact that today's program is the best part of the program. That is no reflection on what has gone before, because I think we have had the best papers presented at this session that I have ever heard at a state medical meeting. I think the program has been the best selected program and the essayists have performed their jobs uniformly well.

PRESIDENT SCOTT: I want to present to the House Dr. Guthrie. (Applause.)

Is there any other business?

A motion was regularly made, seconded and carried, that a resolution of thanks and appreciation be prepared and extended to the following: President Garrett of Teachers' College; Miss Florence Schneider; Miss McClanahan; Miss Gwynn; the Times-Journal; the Park City News; Warren County Medical Society; Woman's Auxiliary of the Warren County Medical Society; O. V. Clark and the Coca-Cola Company.

Sept. 15—Voucher Check No. 8	21.15
LOUISVILLE POSTMASTER, Louisville	
To postage, 6-15-30-39	8.20
To postage, 7-1-31-39	12.95
	21.15
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 15—Voucher Check No. 9	6.00
SIMMONS STUDIO, Danville	
To 2 8x10 pictures and views of Weisiger Plaque McDowell Knocker (McDowell Fund Expense)	6.00
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 15—Voucher Check No. 10	31.21
BUSH-KREBS CO., Louisville	
To 6 Sq. Copper HT's Portraits of Men for Annual Number	21.80
To 1 Sq. HT X-ray Illustration	3.89
To 1 Sq. Copper HT Portrait for Program	5.52
	31.21
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 15—Voucher Check No. 11	15.45
SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville	
To long distance calls	15.45
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 15—Voucher Check No. 12	37.57
COURIER-JOURNAL JOB PRINTING CO., Louisville	
To 2,500 inserts of photograph of John W. Scott, M.D., for Annual Number	37.00
Postage and Insurance	.57
	37.57
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 15—Voucher Check No. 13	53.62
F. & V. MANUFACTURING CO., East Providence, R. I.	
To 355 Bangles Bowling Green	53.62
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 15—Voucher Check No. 14	90.20
THE TIMES-JOURNAL PUBLISHING CO., Bowling Green	
To 2,500 August Issue—84 pages	621.00
To Audit—6 point	75.00
To Inserts	5.00
To Express on Inserts	.76
To Postage on returned cards	.44
	702.20
Less 100 July Journals short	12.00
Less 12th payment on note of \$1,400.00	75.00
	87.00
	615.20
Less credit by Check No. 187 dated 7-31-39 (\$600.00 less \$75.00)	525.00
	90.20
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—Voucher Check No. 15	135.00
A. T. McCORMACK, M.D., Louisville	
To September salary, Secretary	135.00
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—Voucher Check No. 16	93.42
L. H. SOUTH, M.D., Louisville	
To September salary, Business Manager	90.00
To expense of trip to Bowling Green and return in regard to Journal	3.42
	93.42
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—Voucher Check No. 17	90.00
J. F. BLACKERBY, Louisville	
To September services rendered Committee on Public Policy	90.00
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—Voucher Check No. 18	105.40
FLVA GRANT, Louisville	
To September salary, Bookkeeper	75.00
To expenses for State Meeting at Bowling Green	30.40
	105.40
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—Voucher Check No. 19	50.00
ELIZABETH CONKLING, Louisville	
To September salary, Stenographer for Medico-Legal Committee	50.00
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—Voucher Check No. 20	50.00
P. WILLETT HAGAN, C.P.A., Louisville	
To auditing accounts	50.00
Approved by Council and Ordered Paid by House of Delegates.	
Sept. 30—Voucher Check No. 21	17.25
SOUTHERN BELL TELEPHONE & TELEGRAPH CO., Louisville	
	17.25
Approved by Council and Ordered Paid by House of Delegates.	

Sept. 30—Voucher Check No. 22 -----			5.01
MEFFERT EQUIPMENT CO., Louisville			
To 1 592 Doc. Case -----	1.00		
To 1 set A-Z Legal Guides -----	1.00		
To 3 pkgs. No. 103 Plain Memo Book Sheets -----	.45		
To 4 No. 93 Card Boxes at 64c -----	2.56		
		5.01	
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 23 -----			96.70
CHARLES A. VANCE, M.D., Lexington			
To expenses as Councilor of the 10th District from 9-1-38—9-1-39 -----	96.70		
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 24 -----			515.50
THE TIMES-JOURNAL PUBLISHING CO., Bowling Green			
To 2,300 September Issue—72 pages -----	504.00		
Less 13th payment on note of \$1,400.00 -----	75.00		
		429.00	
Less credit by Check No. 194 dated 8-31-39 (\$500.00 less \$75.00) -----		425.00	
		4.00	
To 2,300 October Issue—72 pages -----	504.00		
Less 14th payment on note of \$1,400.00 -----	75.00	429.00	
		433.00	
To 800 Annual Programs, 28 pages including cover -----		82.50	
		515.50	
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 25 -----			1.75
ELECTRIC BLUE PRINT & SUPPLY CO., Louisville			
To 5 sheets No. 9—30x40 Mounting Board -----	1.75		
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 26 -----			5.76
RAILWAY EXPRESS AGENCY, Louisville			
To express for Journal, as follows:			
From Bowling Green, 6-14, 15, 24 and 8-14-39 -----	3.97		
To Bowling Green, 8-16-39 -----	1.04	5.01	
To express for Association, as follows:			
To Bellevue, 8-11-39 -----	.25		
To Chicago, 8-11-39 -----	.25		
To Madisonville, 8-29-39 -----	.25	.75	
		5.76	
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 27 -----			4.00
H. HESSE, Louisville			
To 1 copy and 2 8x10 prints of Dr. C. H. Spillman -----	4.00		
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 28 -----			9.56
LOUISVILLE POSTMASTER, Louisville			
To postage, 8-1—31-39 -----	9.56		
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 29 -----			6.30
K. C. KENEY, London			
To 1 tombstone holder, including material and labor -----	5.50		
To express charges -----	.80		
		6.30	
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 30 -----			75.00
GILLILAND LABORATORIES, Marietta, Pa.			
To refund of amount paid for exhibit space No. 4 at 1939 State Meeting (space not occupied) -----	75.00		
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 31 -----			45.00
V. A. STILLEY, M.D., Benton			
To expenses as Councilor of the 1st District -----	45.00		
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 32 -----			10.00
D. M. GRIFFITH, M.D., Owensboro			
To expenses as Councilor of 2nd District -----	10.00		
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 33 -----			24.25
W. B. ATKINSON, M.D., Campbellsville			
To expenses as Councilor of the 6th District -----	24.25		
Approved by Council and Ordered Paid by House of Delegates.			
Sept. 30—Voucher Check No. 34 -----			19.65
PROCTOR SPARKS, M.D., Ashland			
To expenses as Councilor of the 9th District -----	19.65		
Approved by Council and Ordered Paid by House of Delegates.			

Sept. 30—Voucher Check No. 35 -----		49.29
MAYME SULLIVAN, Louisville		
To reimbursement for the following:		
Express to Bowling Green for Journal, 6-15-39 -----	1.10	
Telegrams to Washington, 6-30-39; Paducah, 7-19-39 and Chicago, 7-19-39, for As-		
sociation -----	5.59	
	<hr/>	
	6.69	
To expenses for State Meeting at Bowling Green for self, night watchman, stereoptican		
operator and miscellaneous items -----	42.60	
	<hr/>	
	49.29	
Approved by Council and Ordered Paid by House of Delegates.		
Sept. 30—Voucher Check No. 36 -----		12.97
RAY WUNDERLICH, Louisville		
To expenses for State Meeting at Bowling Green -----	12.97	
Approved by Council and Ordered Paid by House of Delegates.		
Sept. 30—Voucher Check No. 37 -----		13.15
ELIZABETH THOMAS, Louisville		
To expenses to Council Meeting at Mammoth Cave, 8-20-39 -----	3.85	
To expenses to State Meeting at Bowling Green -----	9.30	
	<hr/>	
	13.15	
Approved by Council and Ordered Paid by House of Delegates.		
Sept. 30—Voucher Check No. 38 -----		7.20
AGNES E. BLAIR, Louisville		
To expenses for State Meeting at Bowling Green -----	7.20	
Approved by Council and Ordered Paid by House of Delegates.		
Sept. 30—Voucher Check No. 39 -----		82.70
ROGER I. LEE, M.D., Boston, Mass.		
To expenses as Guest Speaker at State Meeting at Bowling Green -----	82.70	
Approved by Council and Ordered Paid by House of Delegates.		
Sept. 30—Voucher Check No. 40 -----		32.25
DONALD GUTHRIE, M.D., Sayre, Pa.		
To expenses as Guest Speaker at State Meeting at Bowling Green -----	32.25	
Approved by Council and Ordered Paid by House of Delegates.		
Sept. 30—Voucher Check No. 41 -----		75.00
LOUIS HAMMAN, M.D., Baltimore, Md.		
To expenses as Guest Speaker at State Meeting at Bowling Green -----	75.00	
Approved by Council and Ordered Paid by House of Delegates.		

C. A. VANCE: I move we adjourn.

The motion was seconded and carried
and the House adjourned at 9:25 A.M.,
sine die.

Respectfully submitted,

A. T. McCORMACK, *Secretary*.



Kentucky Medical Journal

Published Monthly By
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Incorporated

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NEXT MEETING: LEXINGTON
1940

EDITORIALS

ANOTHER DIAGNOSIS AND PROGNOSIS OF THE PRACTICE OF MEDICINE

Pertinent to current discussion of the present status of the practice of medicine with respect to its relationship to social economics, the remarkable valedictory address of the retiring President of the New Haven County Medical Association, Creighton Barker, M. D., of New Haven, was published in the October issue of the Journal of the Connecticut State Medical Society.

Dr. Barker had been Clerk, Vice-President and President of his county society for seventeen years, the longest period in which one person had so served it.

After expressing his appreciation to those with whom he had had the privilege of such close official and professional association, Dr. Barker presented a pure gem of concise expression of his philosophical and prophetic observations which we quote as follows:

"It may be that when the final scroll of history is unrolled, these seventeen years will span the greatest changes that medicine will record, the closing of an old epoch and the opening of a new. The science of medicine has made great progress during those years in the vast field of chemistry in relation to disease, the entirely new knowledge of the vitamin elements in diet; in a practically workable understanding of the functions of the endocrine glands; in the treatment of disorders of metabolism; in the almost uncanny results of research in specific chemotherapy and in the development of new skills in neuro and thoracic surgery. It has been a time of extraordinary achievement, new in concept, new in design; many ancient and inadequate methods have been discarded, and new ones sought and found. While all this has been going on in medical science, a part of medicine has remained static. It is a rather intangible part to which we have heretofore given little thought, and is not easy to define simply. Perhaps the "availability" of medicine is the best way to put it. The science and methods of medicine have gone ahead so fast that devices for the useful distribution of them have not kept pace. The reasons for this are numerous and complicated, partly economic, partly social and partly our own fault. And they are so closely interwoven that although they may be independent they are practically inseparable.

By a strange coincidence this Association was meeting in Waterbury on that fateful October day in 1929, when the security and

commodity markets collapsed. Not many members were courageous enough to leave their brokers offices, and those who did come to the meeting were more interested in the Wall Street dispatches than in the program. At the time no one of us realized the far reaching influence the hectic happenings of that Thursday and the event that led up to them, would have on medical practice ten years hence, but surely the professional lives of us all have been affected by disrupted economics.

Jolted by economic catastrophe society has become disordered, political parties have new bases for alignment, labor has become increasingly powerful, capital enterprise has been looked upon with disfavor and medicine has ceased to be an independent priesthood, a law unto itself. Perhaps I draw too simple an analogy, when I see that the people are coming to look upon medical care as a public utility, like electric power, needed by everyone and necessarily available to meet that need. In all logic it is not an unreasonable point of view, but we have not been quite willing to accept it. We are reluctant to forsake some of our old traditions, and somewhat remiss in our efforts to mold public opinion. A rather one sided picture has been presented to the public, and the other phases of the problem will remain unexplained unless medicine itself undertakes the task. Changes in the distribution of medical care are going on, and I believe others are bound to come. This will inevitably lead, as it has already led, to increased interest in medical practice on the part of the people, and increased influence and authority over medical practice from Government, which is the people's agent.

If the best interests of our profession are to be served during these times of confusing change, medical associations such as ours can no longer remain quiescent laissez-faire organizations with their future behind them. Our problems are no longer wholly within our selves. American medicine has reached the stage where it is playing a vital role in the nation's economy. We have a public and social responsibility that must be met, not to see those responsibilities reflects upon our intelligence, to shirk them will surely bring us discredit.

No one is more reluctant than I to advocate that medicine go into public politics, but the fact is that public politics have come into medicine, and wisdom points that we should meet the situation fairly and with the honest strength that is surely ours to use.

There will be some among you who will

feel that the views I have expressed in this brief valedictory are too pessimistic, you may call them radical. It is in my peaceful heart to agree with the most conservative of you, but alas! I cannot delude myself. The relatively calm order of medical practice that prevailed that fine autumn day seventeen years ago when I first became your Clerk, has gone, and no amount of pious hope or wishful thinking on your part or mine will bring it back. In the new scene are things that are neither familiar nor sentimental objects, but I am confident we are intelligent enough and ambitious enough to shape the new order for mutual good.

Connecticut is still the land of steady habits and the best of these is the habit of slow and careful thought. This State is our home; for some a home by birth and inheritance, for others from distant lands a happy home by adoption; but in all of us is an integrity of character that makes us unselfishly willing to serve our fellow man, and a quality of mind capable of facing our problems and soundly and fearlessly arriving at their solution. This Association has opportunities for service that it must meet if medicine is to go on in the self reliant pride that is our honest heritage."

SCIENTIFIC EXHIBITS AT BOWLING GREEN

In the editorial notice of the Bowling Green meeting, which was hurriedly prepared for the October JOURNAL just as it was about ready to go to press, we reserved for special comment commendation of the scientific exhibits.

For many years, we have had scientific exhibits at our meetings and they have been of increasing interest and value in recent years, but this year under the Chairmanship of Dr. Virgil E. Simpson, those who were in attendance had the most complete and valuable demonstration of almost every phase of the progress in the science of medicine. There were 21 booths, each brought up to date the latest knowledge on an important subject. Of particular interest were the exhibits on diseases of the Blood and the Blood-Making Organs under the Chairmanship of J. Richard Gott, Louisville; Diseases of the Brouchi, Maurice G. Buckles, Louisville, Chairman; X-ray Diagnosis of Urinary Tract Lesions, James R. Stites, Louisville, Chairman; Anaesthesia, Dougal M. Dollar, Louisville, Chairman; Fractures, R. Arnold Griswold, Louisville, Chairman; Contact Tuberculosis by the personnel of Waverly Hills

Clinic; Allergy: Methods of Testing, Pollen Counts, Photoscopic Colored Slides and Moving Pictures, Armand E. Cohen, Louisville, Chairman; Cancer of the Skin, Jesshill Love, Louisville, Chairman; Laboratory Technique, Kentucky Society of Medical Technologists; a most interesting exhibit "Commonwealth of Kentucky" by the Division of Welfare under the supervision of J. G. Wilson, Director of the Division of Hospitals and Mental Hygiene; a particularly valuable demonstration of the Sex Hormones, by the Department of Obstetrics and Gynecology, University of Louisville, Medical Department; specific exhibits of great scientific and educational value were those on Polypoid Lesion of the Colon and Rectum, William J. Martin, Louisville, Chairman; and Joseph C. Bell, Louisville; Clinical Applications of Laminography, D. Y. Keith, Louisville, Chairman; the Use of Chromocized Beef Tendon for Internal Fixation of Fractures, Frank P. Strickler; Osmotic Drainage, E. Dargan Smith; The Seminal Vesicles, Lytle Atherton, Louisville; Demonstrations and Findings of Multiple Myeloma, Sam A. Overstreet, Louisville; Diseases of the Veins, Woolfolk Barrow, Lexington; and X-Ray Studies of the Gall Bladder and Biliary Ducts, Malcolm Thompson, and Joseph C. Bell, both of Louisville.

Each exhibitor had an almost constant stream of visitors in his booth, who were delighted with the exhibits, lectures, slides, moving pictures, etc. Our only regret is that every physician in Kentucky could not have the privilege of participating in the use of this fine demonstration of the progress of the science of medicine.

There was also a very interesting demonstration by Dr. Morris Flexner, Louisville, of the committee on methods of birth control for the information of the physicians who were in attendance.

The scientific exhibits at the Bowling Green Session set a standard which we hope will be reached in the future, but which we can hardly hope to excel.

DR. FISHBEIN

The editor of the Journal of the AMERICAN MEDICAL ASSOCIATION, Dr. Morris Fishbein will be the guest of the Frankfort County and Fifth District Medical Societies at Frankfort about 4:00 p. m. Wednesday, December 13. Following this meeting, dinner will be served at 6:00 p. m. at the Christian Church by the Forum Club

at Frankfort, joint host with the Medical Societies in honoring Dr. Fishbein.

At about 6:45 p. m. Dr. Fishbein will deliver an address before the Frankfort Forum Club.

Those physicians and their wives who have heard this distinguished physician and medical editor will only need to be notified of the time and place; those who have not heard him are urged to come to Frankfort and spend the afternoon and evening of December 13 under the spell of one of the most intriguing and fascinating orators before the American public.

FORUM:

WESTBROOK SANATORIUM

Richmond, Virginia

May 31, 1939

Dr. Wm. E. Gardner

332 West Broadway

Louisville, Kentucky

Dear Dr. Gardner:

I am much obliged to you for a copy of the program of the official dedication of the Memorial Home at Danville, Kentucky, on May 20, 1939, of Ephraim McDowell and Jane Todd Crawford. I think it highly proper that the dedication should be made equally to them because they were both brave and adventurous spirits and without the high courage of each of them the momentous operation would not have been performed.

Not long ago in driving from Lexington to Staunton, in Virginia, I stopped on the way-side to read a metallic marker erected by the State of Virginia near the birthplace of Dr. Ephraim McDowell. Only a short distance away I passed another such marker at Timber Ridge, where Sam Houston was born, and on the same highway I passed a marker erected to the memory of Cyrus Hall McCormick, who gave the world its harvesting machinery and who thereby revolutionized agriculture. In the same community lived also Gibbes, who conceived the continuous stitch and through that motivation he devised the sewing machine, which finally enabled women to sew with their feet instead of with their fingers, as they had been doing throughout the ages. I wonder every time I drive through that community in the Valley of Virginia what there was in the atmosphere there that produced such highly individualistic individuals. While Thomas J. Jackson was teaching in the Virginia Military Institute at Lexington for five or six years before the Civil War he was undoubtedly fitting himself

for that mighty struggle which deprived him of his life and likewise immortalized him.

Just outside of Marion, North Carolina, not many miles east of Asheville, stands near the highway the old home of Col. Joseph McDowell. He was one of the heroes of King's Mountain. That battle was small in number but it undoubtedly turned the tide in the Revolutionary struggle, and I am certain that from that small battle Cornwallis was started directly to Yorktown. Col. Joseph McDowell was, of course, near of kin to Dr. Ephraim McDowell. Thomas H. Benton, one of the first United States Senators of Missouri, was born in my native North Carolina. He married a Miss McDowell of the Valley of Virginia. I remember Senator Benton tells of going to the Valley to spend Christmas with his wife when she was visiting her people and that on his return to Washington, on horseback, I suppose, he stopped at Monticello to visit Thomas Jefferson, then in extreme old age. I believe that was probably both the first and last time that he saw Mr. Jefferson. He was, of course, profoundly impressed by him. Senator Benton's daughter, Jessie, who was a McDowell through her mother, became the wife, much against her father's wishes, of Gen. John C. Freemont whom Stonewall Jackson hurled out of the Valley of Virginia. General Freemont was born in the South, in Savannah, I believe, and was reared there, but he was with the Union forces during the Civil War. He was an intrepid and a highly skillful explorer and he gave the government an enormous amount of helpful information about much of our unknown western country. General Freemont not only missed the presidency but he failed for some reason to be a big man. A life of him is just off the press and I am anxious to read it.

I was glad to read in the press the other day that the State of Alabama had recently erected a memorial to Dr. James Marion Sims. We are doing something not only helpful to ourselves but helpful to our medical successors and to the progress of medicine also when we memorialize those doctors who carried the torches high when the travelling was difficult and the nights were dark.

I hope that every good word that was spoken at the McDowell-Crawford dedication was recorded and that it will all be published and preserved.

Faithfully,
J. K. HILL.

There are three wicks you know to the lamp of a man's life: brain, blood, and breath. Press the brain a little, its light goes out, followed by both the others.—Oliver Wendell Holmes.

COUNTY SOCIETY REPORTS

Jefferson: The first fall meeting of the Jefferson County Medical Society was held at the City Hospital, September 18, at 8:15 p. m.

The program was as follows:

Refresher Course in Pathology 8:00 to 8:15 p. m.

The Pathogenesis of Anemia. (7) "Anemia as a Problem for the Surgeon." Department of Pathology, University of Louisville, Harold Gordon, M. D.

1. "Surgery of the Gallbladder and Biliary Passages." J. Garland Sherrill, M. D.

2. "Preoperative and Postoperative Care in Diseases of the Gallbladder and Common Duct." A. M. McKeithen, M. D.

Discussion opened by Virgil E. Simpson, M. D., and C. W. Dowden, M. D.

W. B. Troutman, Secretary.

Jefferson: The Jefferson County Medical Society program for the month of October was as follows:

October 2: 8:15 P. M.

The Pathogenesis of Anemia. (8) "Anemia as a Problem for the Hygienist."

Department of Pathology, University of Louisville, Harold Gordon, M. D.

1. "Surgery of the Gallbladder and Biliary monia in Children." Wm. W. Nicholson, M. D.

Discussion opened by: J. Murray Kinsman, M. D., and Lee Palmer, M. D.

2. "Acute Pharyngo-Laryngotracheo Bronchitis in Children." Harry S. Andrews, M. D.

Discussion opened by: Maurice G. Buckles, M. D., and J. S. Baumgardner, M. D.

October 16: Refresher Course in Hematology, 8:00 to 8:15 P. M.

The Pathogenesis of Anemia (9) "Anemia as a Problem for the Dermatologist and Syphilologist." Department of Pathology, University of Louisville, Harold Gordon, M. D.

1. "Diagnosis and Treatment of Broad Ligament Varicosities," W. O. Johnson, M. D.

Discussion opened by: Chas. W. Hibbitt, M. D., and Laman A. Gray, M. D.

2. "Henoch's Purpura, with Report of Case." B. Wilson Smock, M. D.

Discussion opened by: A. Clayton McCarty, M. D., and Marion F. Beard, M. D.

W. B. Troutman, Secretary.

NEWS ITEM

Dr. A. T. McCormack, State Health Commissioner, has been elected a director of the International Society of Medical Health Officers, at a meeting held in Pittsburgh in conjunction with the annual convention of American Public Health Associations.

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REST COTTAGE

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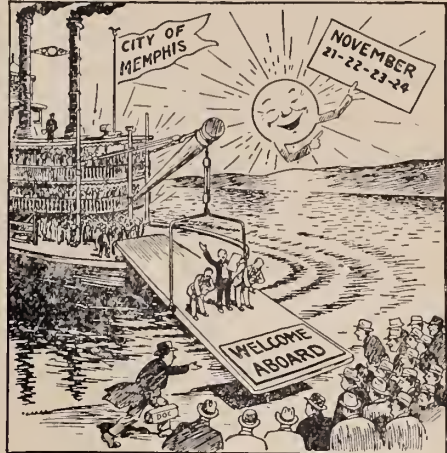
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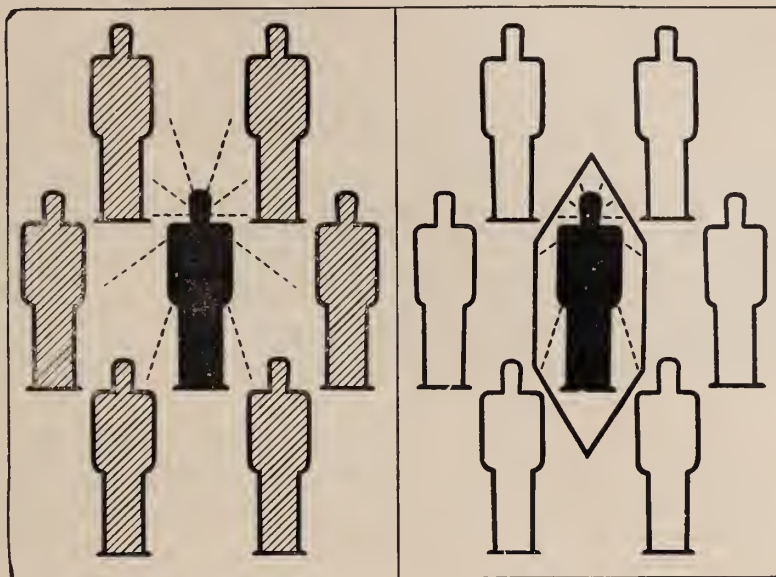
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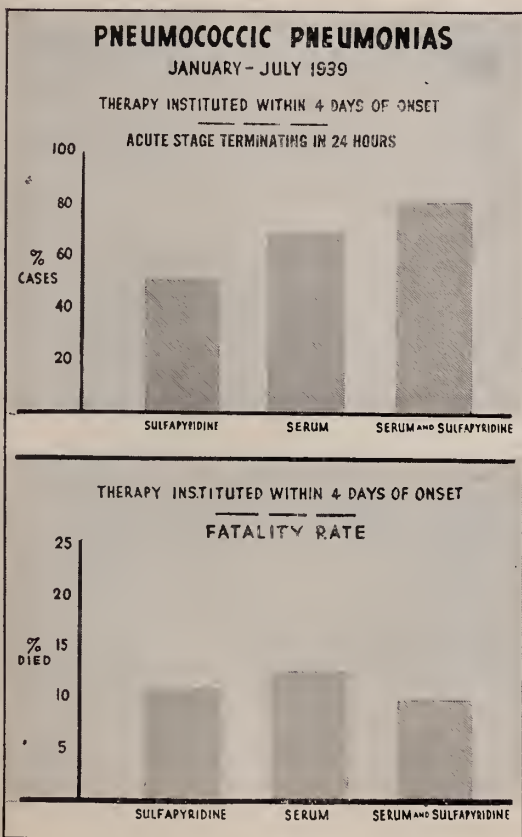
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*LONG, PERRIN H. and WOOD, W. BARRY, JR.: Ann. Int. Med., Vol. 13, No. 3, Sept., 1939, Page 487.

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Waukesha, Wis.

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| 2. Fermentation of dextrose | 4. Agglutination test |
| 5. Alkali solubility test | |

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*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shulanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

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CALENDAR OF COUNTY SOCIETY MEETINGS

COUNTY	SECRETARY	RESIDENCE	DATE
Acuir	N. A. Mercer	Columbia	December 6
Allen	A. O. Miller	Scottsville	December 27
Anderson	J. B. Lyen	Lawrenceburg	December 4
Ballard	F. H. Russell	Wickliffe	December 12
Barren	Rex Hays	Glasgow	December 20
Bath	H. S. Gilmore	Owingsville	December 11
Bell	E. S. Wilson	Pineville	December 8
Boone	R. E. Ryle	Walton	December 20
Bourbon	Eugene L. D. Blake	Paris	December 21
Boyd	Hubert J. Pritchard	Catlettsburg	December 5
Boyle	P. C. Sanders	Danville	December 19
Bracken-Pendleton	W. A. McKenney	Falmouth	December 28
Breathitt	Philip Bress	Jackson	December 19
Breckenridge	J. E. Kincheloe	Hardinsburg	December 14
Bullitt			
Butler	G. E. Embry	Morgantown	December 6
Caldwell	W. L. Cash	Princeton	December 5
Calloway	Hugh L. Houston	Murray	December 14
Campbell-Kenton	Joseph H. Humpert	Covington	December 7
Carlisle	E. E. Smith	Bardwell	December 5
Carroll	J. M. Ryan	Carrollton	
Carter	Don E. Wilder	Grayson	December 12
Casey	William J. Sweeney	Liberty	December 28
Christian	D. M. Clardy	Hopkinsville	December 19
Clark	R. E. Strode	Winchester	December 15
Clay	J. L. Anderson	Manchester	December 12
Clinton	S. F. Stephenson	Albany	December 16
Crittenden	C. G. Moreland	Marion	December 11
Cumberland	W. F. Owsley	Burkesville	December 6
Daviess	James E. Hix	Owensboro	December 12 & 26
Elliott			
Estill	Virginia Wallace	Irvine	December 13
Fayette	D. E. Scott	Lexington	December 12
Fleming	Roy Orsburn	Flemingsburg	December 13
Floyd	J. G. Archer	Prestonsburg	December 27
Franklin	Grace R. Snyder	Frankfort	December 7
Fulton	J. C. Morrison	Fulton	December 13
Gallatin	J. M. Stallard	Sparta	December 21
Garrard	J. E. Edwards	Lancaster	December 21
Grant	Paul E. Harper	Dry Ridge	December 20
Graves	H. H. Hunt	Mayfield	December 5
Grayson			
Green	S. J. Simmons	Greensburg	December 4
Greenup	R. L. Compton	Greenup	December 8
Hancock			December 4
Hardin	D. E. McClure	Elizabethtown	December 14
Harlan	W. E. Riley	Harlan	December 16
Harrison	W. B. Moore	Cynthiana	December 4
Hart	S. F. Richardson	Munfordville	December 5
Henderson	J. Leland Tanner	Henderson	December 11 & 25
Henry	Owen Carroll	New Castle	December 7
Hickman	Layson B. Swann	Clinton	December 7
Hopkins	David L. Salmon	Madisonville	December 7
Jackson			December 2
Jefferson	W. B. Troutman	Louisville	December 4 & 18
Jessamine	J. A. VanArsdall	Nicholasville	December 21
Johnson	P. B. Hall	Paintsville	December 9
Knott			December 23
Knox	W. Parker Clifton	Barbourville	December 21
Larue			December 5
Laurel	Oscar D. Brock	London	December 13
Lawrence	L. S. Hayes	Louisa	December 18
Lee	W. D. McCollum	Beattyville	December 9
Leslie			
Letcher	J. E. Johnson	Jenkins	December 26
Lewis	O. P. Pennington	Vanceburg	December 18
Lincoln	Lewis J. Jones	Hustonville	December 15
Livingston	O. M. Fischbach	Smithland	
Logan	E. M. Thompson	Russellville	December 6
Lyon	H. H. Woodson	Eddyville	December 5
McCracken	J. V. Pace	Paducah	December 27
McCreary	R. M. Smith	Stearns	December 4
McLean	A. R. Will	Orlhou	December 14
Madison	C. B. Billington	Richmond	December 21
Marion	W. E. Oldham	Lebanon	December 26
Marshall	S. L. Henson	Benton	December 20
Mason	C. W. Christine	Maysville	December 13

COUNTY	SECRETARY	RESIDENCE	DATE
Meade			December 28
Menifee	E. T. Riley	Frenchburg	
Mercer	J. Tom Price	Harrodsburg	December 12
Metcalfe	E. S. Dunham	Edmonton	December 5
Monroe	Geo. E. Bushong	Tompkinsville	
Montgomery	D. H. Bush	Mount Sterling	December 12
Morgan			
Muhlenberg	E. L. Gates	Greenville	December 12
Nelson	R. H. Greenwell	Bardstown	December 20
Nicholas	T. P. Scott	Carlisle	December 13
Ohio	Oscar Allen	McHenry	December 5
Oldham			December 6
Owen	K. S. McBee	Owenton	December 7
Owsley			December 4
Perry	W. W. Buckhold	Hazard	December 11
Pike	H. K. Bailey	Pikeville	December 18
Powell	I. W. Johnson	Stanton	December 4
Pulaski	M. C. Spradlin	Somerset	December 14
Robertson			
Rockcastle	Lee Chestnut	Mount Vernon	December 1
Rowan	A. W. Adkins	Morehead	December 11
Russell	J. R. Popplewell	Jamestown	December 11
Scott	Carl M. Gambill	Georgetown	December 7
Shelby	A. D. Doak	Shelbyville	December 21
Simpson	N. C. Witt	Franklin	December 12
Spencer			
Taylor	W. B. Atkinson	Campbellsville	December 7
Todd	B. E. Boone, Jr.	Elkton	December 6
Trigg			December 27
Trimble			
Union			December 27
Warren Edmonson	W. O. Carson	Bowling Green	December 13
Washington	J. H. Hopper	Willisburg	December 20
Wayne	Frank L. Duncan	Monticello	
Webster	C. M. Smith	Dixon	December 29
Whitley	C. A. Moss	Williamsburg	
Wolfe	G. M. Center	Campion	December 4
Woodford	George H. Gregory	Versailles	December 7

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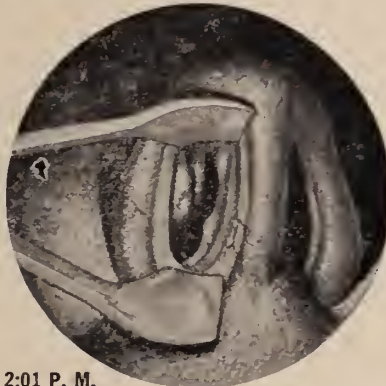
Case History: F. O'B. Age 23, male, white. Worker in chronic acid plant. Complained chiefly of earache and head stoppage. Observed at Nose and Throat Clinic of a Philadelphia hospital.

EFFECTIVE IN MINUTES



1:52 P. M.

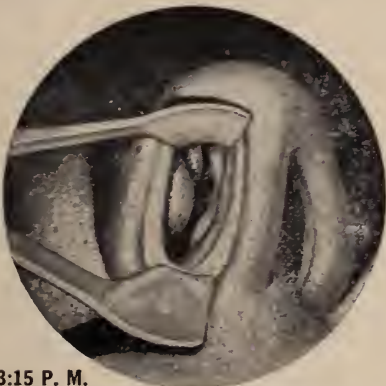
Swollen turbinates and septum. Two inhalations from 'Benzedrine Inhaler.'



2:01 P. M.

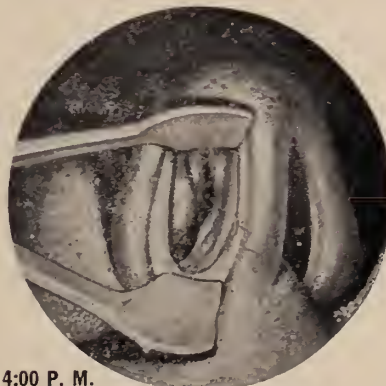
Maximum shrinkage. Inferior and middle turbinates and septum decongested.

LASTING FOR HOURS



3:15 P. M.

Inferior turbinate and septum still shrunken. Middle turbinate exposed.



4:00 P. M.

Both turbinates still contracted. Very slight return of turgescence.

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EST.  1841

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AMPOULES SOLUTION LIVER EXTRACT CONCENTRATED, LILLY—contain 2 U.S.P. units per cc. Supplied in 10-cc. ampoules and in packages of four 3.5-cc. ampoules.

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KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. 37, No. 12

BOWLING GREEN, KY.

DECEMBER, 1939

PLATFORM OF THE AMERICAN MEDICAL ASSOCIATION

The American Medical Association advocates:

1. The establishment of an agency of federal government under which shall be coordinated and administered all medical and health functions of the federal government exclusive of those of the Army and Navy.

2. The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health and the care of the sick on proof of such need.

3. The principle that the care of the public health and the provision of medical service to the sick is primarily a local responsibility.

4. The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.

5. The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.

6. In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established.

7. The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability.

8. Expansion of public health and medical services consistent with the American System of democracy.

THE GALL BLADDER AND THE BILIARY PASSAGES

J. GARLAND SHERRILL, M. D., F.A.C.S.

Louisville.

There is no portion of human anatomy of greater importance than the structures considered in this contribution. There is no inflammatory lesion which varies so greatly in its development; in its clinical course; that results in greater impairment of health; more persistent suffering; more repeated attacks of pain after intervals of quiet, than the complications resulting from disease of the biliary passages and the bile reservoir with the adjacent involved structures.

My views upon these lesions have developed from many years of close clinical observation and may find much disagreement among my medical and surgical friends. No one can gainsay the importance of the biliary structures in digestive processes and in human metabolism; nor is there any possibility of contradiction of the statement that disease, particularly inflammation of these tissues, results in prolonged discomfort, recurrent attacks of illness with complications involving many of the more important organs of the body. Among these will be mentioned later the more outstanding.

Emphasis must be placed upon the fact that while the development of gall stones in the biliary vesicle and bile passages occurs frequently and is most important, the really prominent factor is the causative inflammation.

Naunyn many years ago demonstrated the formation of stones as secondary to inflammation of the mucosa aided by the biliary stasis and by improper diet and habits of life. All workers in this field have found gall stones even in the smallest biliary radicals where there is obstruction. This is particularly true in the late obstruction due to carcinoma of the ducts. It is true also that cancer not infrequently follows the formation of gall stones. Moreover carcinoma of the liver and even portions of the bile passages may be present in the absence of stones. Slade in a large number of necropsies in which gall stones were seen in the gall bladder found a very high percentage of carcinoma in the sections made of these tissues. He gave the frequency as 58.8%. This estimate is much higher than is recorded by other surgeons whose findings are based upon cases met at operation. The

reason for this apparent discrepancy lies in the fact that the operative cases occur in younger patients and come under observation at an earlier period in the course of the disease before carcinomatous change occurs. Slade's cases were in older individuals and in most cases the stones had existed for long periods. The records seem to show that cancer rarely is found in gall bladders from which stones have been removed. From this observation it would appear that Cholecystostomy is preventive of carcinoma but perhaps to a less degree than is Cholecystectomy. Rowlands, R. P., (The Operations of Surgery, by Jacobson and Rowlands, 1911, P. 564) says: "Another reason for removing the gall bladder is that a thick walled and contracted gall bladder may be the seat of malignant disease which may only be discovered by microscopical examination after it has been removed." He also says: "Dr. Sherrill (Annals of Surgery, vol. XLIV, P. 866) draws attention to the frequency of this complication in late cases and advocates earlier operation to avoid it." Mr. Rowlands also says: "There is little or no real evidence that carcinoma may form after the removal of the stones, but only that the disease may be overlooked in an early stage, while it is yet removable with hope of permanent immunity from recurrence."

It is not my purpose to enter into a discussion of the manner or direction by which infection reaches these structures, since it would lead to needless debate over a point concerning which no agreement would be reached.

A proper recognition of hepatic function, realization of the fact that storage of bile is not the sole function of the gall bladder, but that certain secretory action is a property of the mucous lining and also that certain portions of the stored bile are taken up by the blood and lymph vessels and carried into the blood stream is of importance to workers in this field.

Regulation of flow of bile into the duodenum is not fully understood and it is only within the last few years that efforts to elucidate this point have been made. It has been known for a long time that bile passes into the duodenum intermittently rather than continuously. The arrangement of the muscular fibers about each duct as their junction is approached is quite interesting. Each is surrounded by circular fibers until they join. Just above this point these fibers separate into two portions, one continues as a circular bundle while the other on each side of the duct runs in a longitudinal direction and interlaces with the same fibers from the opposite side. This arrangement



Fig. 1. Very thick gallbladder closely molded about a stone. No bile in the vesicle.
Cholecystectomy.

permits a reciprocal action and thus causes retention of bile in the gall bladder during intervals of digestion. The tonicity of the duodenal wall at the sphincter of Oddi overcomes the pressure in the cystic duct and fills the gall bladder. During the process of digestion, the controlling fibers at the papilla give way to permit escape of bile into the intestine. This view accords fully with the reciprocal nervous mechanism as described by Meltzer.

The sphincter must act in concert with the muscular fibers in the intestinal wall, and the muscular fibers in the wall of the common duct are probably capable of independent contraction. The ability of the common duct to contract is shown by recording changes of pressure in the lumen. This is in accord with the findings of Potter and Mann. (Pressure Changes In The Biliary Tract, *Journal of Medical Sciences*, 1926, 171-202) and also those of Naunyn.

Undoubtedly the bile enters from the common through the cystic duct into the gall bladder. Bile entering the gall bladder is thin, of pale yellowish or greenish hue, and flows freely. Later if it remains there its consistency changes from the addition of mucin from the cells lining the vesicle and becomes thicker and darker in color from absorption of water, coloring matter and bile salts. Boyd (*Special Pathology*, 1934, P.

328) says: "The gall bladder is not a mere passive reservoir for the bile, converting the continuous flow from the liver into an intermittent flow into the duodenum. Its highly specialized structure would be meaningless for such a purpose."

Virchow considered the function of the gall bladder was one of absorption rather than storage. This view is not accurate as it does not take in its full purpose. Most writers agree that marked concentration of bile takes place in the gall bladder. May not this action be a part of the bactericidal power of the biliary function. The concentration of the bile in the bladder in conjunction with the discharge into the intestine during digestion is important. Based upon this idea Lyons proposed "Non surgical drainage," and whether you believe in the efficacy of this plan of treatment or not, it has kept many patients under observation through long periods in fair comfort.

Some authors do not believe that bile is ever delivered from the bladder by this method. Certain drugs do have the property of relaxing the orifice of the duct. In cases of cholecystitis and the presence of gall stones when a full meal is taken, particularly consisting largely of fat, it has long been recognized that a sharp attack of colic is likely to ensue. Clinicians recognize the fact that nothing relieves these symptoms so well as the removal of all food product by gastric lavage, and more quickly than does morphine. This occurrence has a very important place in diagnosis.

Based on storage of bile in the gall bladder, the recognition of its absorptive power and the intermittent discharge of this secretion into the duodenum, Graham, Cole, Copher, and Moore, and their co-workers by painstaking effort have brought to the notice of the profession the use of dyes which are excreted by the liver and concentrated in the gall bladder and are found to be visible in that structure in the skiagram. Their studies of biliary secretion and the hepatic and pancreatic function entering into these processes are epoch making.

A great amount of detailed painstaking experimental work has enabled them to add much to our knowledge of hepatic function and to the recognition of the filling and emptying of the gall bladder, as well as to a clearer understanding of inflammation of these tissues and their pathological physiology. Their work on "Diseases of the Gall Bladder and Bile Ducts" should be carefully studied by all interested in this subject. Every phase of the topic has been given



Fig. 2. Dr. Hall's Case. Showing the biliary tree with a T tube draining white bile from the common duct. The lipiodol has been injected into the liver radicals.

careful consideration, their views clearly elucidated and their conclusions reached by sane and sound reasoning. This work must not be left solely for the Roentgenologist but will prove illuminating to every physician and surgeon. The wide employment of Cholecystography which has resulted from their contribution is of the greatest assistance in the diagnosis of lesions of these organs, particularly in the difficult and chronic cases, but also in the more prompt visualization of the presence of gall stones and the differentiation of other complications.

The cholecystogram seems to prove the occurrence of the intermittent discharge of bile, be the mechanism mechanical or nervous in origin. Saunders in 1797 (quoted above by Graham, Cole and others.) tersely states: "The bile having arrived at the trunk of the hepatic duct, naturally passes forward into the duodenum. But we are not to consider its motion as uniformly progressive and without interruption; for it is probable, from the oblique manner in which the biliary duct perforates the substance of the intestine that the peristaltic motion of that gut, consisting in part of the contraction of its circular and in part of its longitudinal fibers, will, by compressing the duct at its termination, occasion frequent, but momentary interruption."

It requires no great tax on the imagination

to comprehend how changes in the tonicity of the intestine, in its rhythmic contraction, its change of volume, and its movement become factors in the out flow of bile from the duct. Copher and Kodama by measuring the pressure in the common duct and simultaneously recording the tonus, movements, and changes of volume in the duodenum, were able to show that peristalsis, as well as other changes of tonicity, is a factor in the out flow of bile from the duct. When the interductal pressure is high enough, it overcomes the slight resistance normally closing the orifice and flows intermittently into the duodenum. This discharge occurs during a relaxation stage of the peristaltic movement. With these phases a rise and fall occurs in the pressure in the common duct. As the bile passes out of this duct that in the vesicle escapes from the cystic duct aided by contraction of its coats and by pressure in the gall bladder, as well as by the suction of the on flowing stream.

Your attention is called to the clinical importance of the subject and particularly to present some thought which may enable practitioners, both medical men and surgeons, to lessen the incidence of such lesions, to prevent recurrence and protraction of the attacks thus to avoid the numerous complications, both disabling and perhaps eventually fatal. Everyone in this audience is able in the majority of cases to diagnose Cholecystitis in the early stages. Some cases are confusing at this stage and perhaps difficult to differentiate both early and late. The main delay in diagnosis is not nearly so frequent as delay in arriving at the proper application of definite treatment. Much of this delay is due to lack of clear understanding of the process and proper evaluation of the different plans of medical, dietetic and hygienic care.

Much time is wasted in many cases of Cholecystitis in endeavoring to patch up the patient so he can carry on without too much discomfort. Do not infer from this statement that I think every case of acute cholecystitis should be rushed to operation. Mild cases do occur in which prompt medical treatment properly applied relieves the condition at once and the patient may never have another attack. Some cases are more severe and you have seen recurrent attacks with a remission of the febrile curve often treated in the old days as malaria or remittent fever even in the presence of jaundice, often localized tenderness and some times of sharp pain in the hepatic region.

Some of these cases recovered under the diagnosis mentioned above or that of hepatitis. Occasionally there is no recurrence.

When, however, the symptoms recur at varying intervals the patient demands further investigation and a positive diagnosis.

In order to determine the presence of gall stones or disease of, or the functional activity of the gall bladder, following the lead of Graham and others, the Roentgenologist is brought into consultation and affords assistance to the practitioner and to the surgeon, who, perchance, may be called by this time to advise as to the necessity for intervention. Even with the best of our methods of investigation and in the absence of gall stones the functional test does not always clarify the chronic case with recurring symptoms. Usually by careful cooperation with the specialists in the case a diagnosis can be reached with accuracy.

At this point many factors enter into the discussion as; economic surroundings, age and physical condition of the patient. Complications as; diabetes, nephritis, cardiac and arterial disease. The proper evaluation of the risk in a chronic case when the biliary and gall stone condition because of the complications requires great care and judgment.

We desire to emphasize the fact that chronic Cholecystitis and Cholangitis at some time in their course could have been prevented either by skillful and prompt medical treatment or by timely surgical aid in the acute attack or at some period in one of the less pronounced attacks or better still in the interval. To arrive at this happy solution of the problem closer cooperation between the attendants is urged.

My position in reference to the chronic cases is firmly settled. In the presence of chronic or recurrent inflammation of the gall bladder in a patient who is a safe risk with or without stones intervention is advised. In the acute cases of empyema of the gall bladder, where rupture and necrosis is probable with or without jaundice, intervention is imperative as a life saving measure, and also as an economic proposition. While I am extremely radical in urging early and prompt intervention in the cases described, I am equally conservative in the management of the gall bladder in the large majority of operative cases. Whenever a functioning gall bladder can be saved and the infection which kept the process active can be cured by drainage, undoubtedly this is the most desirable treatment.

A strong argument in favor of this plan lies in the fact that such treatment with proper medical care results in complete relief, in many cases, and in the few in which symptoms persist or even in the rarer in-

stance in which stones reform or neighboring organs become involved the practitioner can still offer the patient further surgical and medical aid. If, however, a gall bladder is excised because it is easy of access, or is of the so called "strawberry" type, so emphasized by some, future infection of the bile passages, which surely follows, puts in the physician's care a patient who is chronically ill, difficult to handle and to relieve. The surgeon sheds the responsibility upon the shoulders of the practitioner, who perhaps lives far away. The reason for such illness lies in the unrelieved infection of the bile ducts extending into the biliary radicals in the liver and also in the ducts and the parenchyma of both the liver and the pancreas. The common duct becomes distended up to its full distensile capacity, then the musculature at the outlet gives way and the patient has a bilious or a fatty diarrhea or both. If these conditions do not develop, the pressure in the duct becomes greater than that in the secretory tissues of the liver, and results in white bile in the duct. Soon hepatitis develops with a muddy type of jaundice, loss of liver function and destruction of the renal parenchyma. The absorption of the bile products from the hepatic and common ducts, as a result of the obstruction just mentioned, overloads the blood with bile products, increases the jaundice, and tissue staining, finally destroys the secretory cells of the kidney and causes degeneration of the heart muscle. Upon the relief of the obstruction, the papilla by increasing pressure overcomes these tissue changes for a time, but the pathological process increases until finally attempts at surgical relief are difficult and dangerous. Most of such cases live only a brief time as chronic invalids when this can not be successfully accomplished.

There are certain clear indications for cholecystectomy and this line of treatment should be followed. The most important of the indications is acute perforative inflammation with gangrene. In this condition the infection is extremely severe and the sloughing tissue must be sacrificed in order to save the patient. In such a case when only the fundus is involved in the slough, it is wise to cut away the involved portion and leave sufficient of the duct to allow it to carry a drain. This can not be employed when the common duct is evidently infected without drainage of this duct as well, in addition to the drainage of the cystic duct.

Occasionally one meets a number of adhesions between the inflamed gall bladder

and surrounding structures. This condition results at times from ulceration of the wall in the effort to extrude stones from the gall bladder into the intestine. This occurs not infrequently. I have found stones extruded from the gall bladder into an abscess cavity in the liver and between the intestinal folds and liver tissue stones lying free. In such cases the removal of the vesicle, or at least its mucosa, will best meet the indication. If the mucosa is removed and the other coats employed for drainage the result will be satisfactory. If the gall bladder is removed drainage of the common duct is essential.

When the pancreas is indurated, thickened or shows evidence of acute or chronic inflammation the common duct should be drained in every instance. When the pancreas shows evidence of hemorrhage or of fluctuation its capsule should be incised and drains of soft rubber brought to the surface. When stones are present in the common duct and in the hepatic radicals they should be removed and the common duct drained until sure that the bile again flows into the duodenum. My associate, Dr. D. P. Hall, has recently handled a case of white bile in the common duct from obstruction at the ampulla evidently the result of an impacted stone which had left a constriction or the stone was too small to be shown by the Cholecystogram and too small to be certainly identified at operation. The reason for the belief that the pathology was the result of stone was the small size of the gall bladder, fulfilling Couvoiser's law. Had the condition resulted from cancer of the duct we would have expected to find a large gall bladder. The treatment in his case consisted in placing a T tube drain in the common duct, and permitting the jaundice to subside and the patient to regain his strength and appetite. He showed marked improvement on this plan. An anastomosis of the gall bladder was considered as an alternative measure but the method used seemed much safer. Professor B. O. Pribram of the University Surgical Clinic, Berlin, reported in 1935 that small cholestrin stones in the common duct or ampulla may be dissolved by instilling ether through the common duct drain; two or three cc of ether being introduced and if accompanied by pain the patient is instructed to inhale amyl nitrate which sufficiently relieves ductile pain and relaxes the sphincter of Oddi. The result of this treatment in Dr. Hall's case up to date has been most gratifying.

You may not agree with my contention that other things being equal and because

we believe that the disease under treatment is not the gall stones but the infection which aided by obstruction causes the entire pathologic process, drainage following the necessary surgery should be continued until the bile is sterile and the patient well on the road to complete recovery. It has never seemed to me that it was necessary to sacrifice a bladder because its lining mucosa was red with no corresponding pathology in the other coats. Therefore all gall bladders in which drainage seems safe and likely to cure the infection and the patient should be drained. Per contra all gall bladders which offer obstacles to such recovery and return to normal function should be sacrificed. In addition to the ones mentioned previously as demanding excision we submit as the most positive indication for Cholecystectomy to be chronically thickened organs which point strongly to the likelihood of the development of carcinoma, or where actual carcinomatous change is found by frozen section. Moynihan says: "The close connection between gall stones and malignant disease has never lacked recognition, though opinions have differed as to which is the cause and which is the effect. Opinion is now universally in favor of the view that it is the irritation of the gall stones that determines the incidence of cancer, the view that was first supported by Klebs." He also quotes Couvoiser's record of cases: "Of eighty-four cases of primary cancer of the gall bladder, there were seventy-two in which stones were found; in two others stone has passed in the motions. In the remaining ten no mention of stones is made. In four of these there were certain pathological changes; scarring of the duodenal papilla, stricture thereof, and dilatation of the bile passages which indicated, unquestionably, the former presence of calculi." Moynihan also says: "In very rare instances malignant disease of the gall bladder may occur after cholecystostomy." To Mr. Lawford Knaggs he credits the report of a case where this occurred (Moynihan Gall Stones and Their Surgical Treatment, 1904, P. 102). It is reasonable to believe that unless carcinoma has already become located in the bile producing and storing tissues cholecystostomy is protective against its development although it is likely that excision is more certainly protective.

When the disease is at its height, it will then be necessary to use the most slender diet.—Aphorisms of Hippocrates.

PREOPERATIVE AND POSTOPERATIVE CARE IN DISEASES OF THE GALL-BLADDER AND GALL-DUCTS

A. M. McKEITHEN, M. D.

Louisville

The ideals of surgery in general, for which the entire medical profession has been striving for years, is to reduce mortality to the minimum and to restore the patient as quickly as possible to approximately normal functions and activities. We have made great progress in asepsis and antisepsis; operative technic has been highly perfected, although we hope for much more improvement; but the greatest advancement in recent years has had to do with "making the patient safe for the operation."

We now know that in most instances the preoperative and postoperative treatment is as important or more so, than the operation itself. When to operate is as essential as how to operate. It is in this field that the active co-operation of the surgeon and the medical man is most desirable and has accomplished so much, and where most future progress seems to lie. The proper prophylactic treatment of the patient makes the operation safer, reduces the incidence of postoperative complications, minimizes the stay in the hospital, restores the patient sooner to normal functional activities, and also improves the ultimate ends results.

Notable improvements in preoperative and postoperative care have been made in many fields of surgery, but in the past few years none have been more important than in surgery of the gall-bladder and gall-ducts.

In the preoperative care of the gall-bladder patient our efforts are not directed toward the gall-bladder itself but toward improving the general functional and metabolic activities of the organism as a whole, and specifically toward the blood, the liver and the kidneys. We attempt to avoid or minimize the most common complications, namely hepatic insufficiency, renal insufficiency, hemorrhage, and disturbance of acid-base equilibrium.

Except for specific indications, which will be discussed later, the most valuable agent at our disposal is the use of dextrose, preoperative and postoperative, by mouth, subcutaneously and intravenously. Dextrose is the form of nourishment most readily utilized by the liver and by the muscles. We know that the liver with a high glycogen

store puts up a much better defense than one which is low in glycogen content, therefore we want to supply adequate amounts of sugars which the liver readily converts into glycogen.

The patient who is a good risk with little or no impairment of liver function may take sufficient glucose and fluids by mouth over a period of several days before operation in the form of sweetened fruit juices, candy, Karo syrup, etc. However to insure the best possible fortification we usually give one or more intravenous injections of 1000 cc of 10% dextrose.

The vehicle used for the intravenous administration of dextrose depends upon the individual indications and the preference of the doctor. Those commonly advised are distilled water, saline, and Ringer's, Locke's and Hartman's solutions. These latter solutions do not seem to possess any advantages over normal saline although the fact that Hartman's solution is buffered might theoretically render it better in cases of severe acidosis or alkalosis.

Distilled water is the vehicle most commonly used and is the one of choice where the primary objective is to supply dextrose or in cases of congestion and edema. If dehydration is present or if there is loss of fluids by vomiting, drainage, or bile fistula it is preferable to give dextrose in physiological saline solution. The ability of saline to combine with the fluids in the tissues in osmotic equilibrium is well demonstrated, but if any dehydrating effect of dextrose is desired one should avoid the use of a saline solution.

Five per cent dextrose solution has been found to be most nearly isotonic and for ordinary purposes is the most desirable concentration to be used. In this strength it may be given either subcutaneously or intravenously. Stronger solutions given subcutaneously are likely to cause a slough. Because of the dilution in a great volume of blood stronger solutions may be given intravenously without harm.

The physiologic rate of utilization of glucose given intravenously is the rate at which it is metabolized without producing glycosuria. Given in excess of this rate it produces glycosuria and also carries fluid off with it, producing a dehydrating effect and diuresis. The more this physiological rate is exceeded the more glucose and fluids are excreted. The physiological rate for normal adults has been determined at 0.85 gm per kilogram of body weight per hour. This of course, is variable in disease and much re-

duced temporarily in patients who have been on a low or free carbohydrate diet. The normal physiological rate for a healthy adult weighing 70 Kilograms is 650 cc of 10 per cent solution per hour—other dilutions in proportion. For a large percentage of patients it is definitely lower than this. It is seldom advisable to give it this fast. Except where there is some embarrassment of the circulation,—when it should be given slowly and cautiously,—the optimal rate for utilization and for supplying fluids is from 300 cc to 500 cc per hour for 5 per cent solution and probably not over 300 cc for 10 per cent solution.

Glucose solution may be given either as continuous venoclysis as advocated by Hendon, Matas, and others, or at intervals, which is most commonly used. If not given continuously it should be given at regular intervals and given slowly enough to be utilized.

Glucose has been shown to be of some help in reducing a prolonged coagulation time; it is useful in the treatment of shock; it is quite effective in the prevention and treatment of acidosis; and many cases of persistent vomiting respond satisfactorily to its use.

Transfusion should be used if there is any appreciable degree of anemia, and in jaundiced patients with a prolonged coagulation time it is of great value temporarily in the prevention and control of hemorrhage.

Surgery of the gall-bladder and bile ducts in the presence of jaundice has carried a much higher operative risk than those cases without jaundice. This increased risk has been due to the prevalence of associated hepatic and renal insufficiency and to the tendency of many jaundiced patients to hemorrhage after operation.

With our present knowledge, the judicious use of glucose seems to be our best defense and offense against the renal and hepatic states.

Hemorrhage has long been one of the chief obstacles to successful surgery on the jaundiced patient. Several theories have been advanced from time to time as to why the blood from many patients with jaundice took longer to clot than normally and various lines of treatment have been advocated. It was not until very recently that the apparently true explanation of this, and the prophylaxis and treatment were known. Quick and his co-workers have been chiefly responsible for showing that this prolonged clotting time, which is the cause of hemorrhage

was due to the lack of prothrombin in the blood of some jaundiced patients.

Normally prothrombin is present in the blood in great excess, hence the temporary benefit of transfusion in patients with a hemorrhagic diathesis due to jaundice.

Prothrombin is an unknown chemical substance present in the blood, and is essential in the clotting of blood. Vitamin K is another unknown, derived from various sources, notably alfalfa. It is a fat soluble substance and normally ingested in sufficient amounts but dependent on the presence in the intestinal tract of bile for adequate digestion and synthesis. Vitamin K is apparently a forerunner of prothrombin or necessary in the production of it.

Patients with obstructive jaundice or biliary fistula where bile is not entering the bowel develop a deficiency of prothrombin and if this level decreases sufficiently a hemorrhagic diathesis occurs. Some observers believe that the liver may be concerned in the manufacture of prothrombin and that in some conditions "toxic factors may deplete the supply of prothrombin."

Quick and his co-workers developed a method of determining the prothrombin clotting time; twenty to thirty seconds is considered normal, forty-five seconds indicates that a hemorrhage may occur, and one hundred seconds or over indicates a danger of serious hemorrhage at any time.

By the administration of bile and Vitamin K in amounts varying with the requirement, the prothrombin clotting time may be reduced to normal limits and the possibility of serious hemorrhage practically eliminated. Statistics show that its use both preoperatively and postoperatively is indicated in order to maintain a sufficiently high prothrombin level, as bleeding, when it does occur, may come anywhere within one week after operation.

While these statements regarding prothrombin and Vitamin K are theoretical and may be disproven, there is definite and adequate empirical proof of the effect of this method of treatment in the prophylaxis and control of the hemorrhagic diathesis of jaundiced patients and it deserves continued use and further investigation.

Generally the statements I have made apply both to the preoperative and postoperative care of patients with gall-bladder or biliary tract disease and before going on to consideration of some purely postoperative features I want to bring up a question which I think is most important. Aside from proper preoperative and postoperative care, the thing that makes the big differ-

ence in both the immediate and late results is the complete preoperative study of the patient in every detail. Undoubtedly too many gall bladders are removed through no fault of the gall-bladder. Many cases of associated peptic ulcer or appendicitis go unrecognized and untreated. Mistaken or incomplete diagnosis followed by ill-advised or incomplete surgery is responsible for many of the poor results in gall-bladder surgery.

Postoperative care is in general a continuation of the preoperative treatment. Routine use of subcutaneous and, or, intravenous glucose for two or more days is advisable. If jaundice is present continue the use of bile and Vitamin K for at least four or five days.

It is estimated that the fluid requirements of the postoperative patient varies from about 3000 cc to 6000 cc per 24 hours, depending upon the temperature of the patient and the weather, the amount of perspiration, fluid loss than drainage, vomiting, lavage, etc. The average fluid intake should be enough to cover that loss through respiration, perspiration, drainage, vomiting, etc., plus enough to produce approximately 1500 cc of urine daily.

For gas and gas pains I feel that the best prophylaxis is avoidance of preoperative laxatives and also enemas, except the day before, plus gentleness in handling the bowel, and avoidance of early postoperative laxatives. In the treatment use the rectal tube, glycerine suppository, small stimulating enema, in order, and if necessary pitressin or prostigmin. Heat to the abdomen also often has a very beneficial effect.

If vomiting, gastric retention, or ileus develops the use of the indwelling stomach tube and continuous suction is indispensable in treatment.

Drains, if there are any, should be left in for at least 10 days in order to establish a firm outlet, otherwise why use them.

If there is any wound infection or drainage see that ample opening for free drainage is provided and then leave it alone. Such wound if left alone will heal quicker than one which is always being treated and tampered with by probing, irrigations, etc.

Time forbids the enumeration of many minor details but let us all do everything we can which adds to our patient's safety, comfort and sense of well being both before and after operation.

DISCUSSION

Virgil E. Simpson: The first essayist in this symposium on biliary tract disease has established an impregnable defense by quoting Virchow and himself.

The physiology of the biliary tract continues to hold the interest of the profession. Some of this interest stems from a curiosity surrounding things unknown. It is not known why the gall-bladder contracts; it is not known why when the Sphincter of Oddi is divided or cannulated the gall bladder usually will not fill; it is not known why the bile no longer is ejected in spurts after a cholecystectomy but escapes in a more or less continuous flow instead; it is not known why the intraductal pressure is reduced as low as 10 m.m. in fasting animals after cholecystectomy.

I am primarily interested in the diagnosis of disease of these structures. Here, as elsewhere, it is not always easy or even possible. Consider the colic syndrome, for example. Pain is thought to be an index to the presence of gallstones. And yet a clinically classical picture of colic may occur in the absence of stones. Ivy has demonstrated the possibility of such a seizure when there is an inflammatory edema or if a mucous plug be appropriately located. He refers to this phenomenon as biliary dyskinesia.

It would appear that a differential diagnosis would not be difficult. But isn't it? If an acute appendicitis, or a perforated peptic ulcer, or a subphrenic abscess, or even a coronary occlusion always presented a classical picture, one's diagnostic worries might be less harassing; but do they? Jaundice is as old as medicine, but is it easy to determine its cause? Its many-sided aspects include such varied problems as liver function, osmotic disturbance of red cells, blood destruction, bile circulation, the origin of bile pigment, the metabolism of hemoglobin, which must be better solved before our conception of jaundice is clinically satisfactory.

Neither is the therapeutic field clear of grief. Are we agreed on diet? One reads in the textbooks that fat should be much reduced. And yet the digestion of fat is largely a pancreatic ferment function. The steatorrhoea of pancreas disease is never matched by even a complete absence of bile from the intestinal canal. Is it generally appreciated by the profession that a reduction in fat intake is chiefly desirable because it makes room for a high carbohydrate supply and that emphasis is put on carbohydrates only because damaged liver cells respond more promptly to dextrose? And is it generally remembered that fat somehow energizes the emptying power of the gall bladder? And

does the clinician usually remember that when a biliary tract disease becomes chronic erosion of varicosities of esophagus and rectum may be furthered by a diet of high fiber content?

And, finally, may I again remind this group that routine operative procedures are the product of routine thinking—if that be thinking. The surgeon who routinely removes gall bladders will routinely make mistakes as certainly as the one who doggedly steers his surgical brig always in the direction of cholecystostomy. The operator who only sees the stone and evinces no interest in the causes of stone formation remains an operator with little aspiration to become a surgeon. The routine giving of fluids by vein when a patient can swallow all the fluid he can safely utilize is equally as bad therapy as is practiced by another who neglects to avail himself of the venous route when gastric rebellion makes dehydration not only imminent but operative.

C. W. Dowden: It is not surprising when one considers its multiple functions, that there should be many opinions as to what constitutes adequate medical or surgical treatment of the diseased gall bladder or biliary passages. Increasing knowledge of these functions has been responsible for many changes of ideas, and what was considered proper a decade ago is today considered wrong, and what is right today may be frowned upon ten years hence. Of the many functions of the liver, it is well to discuss three that are understood and today considered of vital importance.

First: The remarkable regenerative capacity of the liver and the large factor of safety depends upon certain definite factors, first an intact portal circulation and the failure to regenerate if the portal circulation is cut off. Likewise, when the common bile duct remains long obstructed there is liver damage, and failure to regenerate as long as this exists. *Second;* the important function of carbohydrate metabolism and controlling blood sugar. When a hardened granular or cirrhotic liver is present, one of its major functions must be thought of, namely, its ability to handle sugar. If it is felt that sugar cannot be mobilized, even the very seriously damaged liver can be protected and lives saved by the proper administration of carbohydrates. *And third,* the important function in metabolism of protein. Even with a small portion of functioning liver remaining, the patient or animal, can be kept comfortable on proper carbohydrate administration, and death will follow—in a very few days—the use of a high exclusive protein diet. It is important, therefore, to protect the body by diminishing the amount of work the liver has to do in regard to the metabolism of protein.

disease of the liver is primary and the gall bladder is secondary in importance. Whether or not the gall bladder should be removed or drained is again becoming highly controversial, but recent knowledge of gall bladder and liver function indicates that in many instances simple drainage offers more for the future comfort and well being of the patient, and certainly in my own considerable experience my cholecystostomized patients caused me less trouble than my cholecystectomized patients, and in an ever increasing number of chronic cholecystic diseases—many with stones—the proper medical management is giving more satisfactory results than surgery. It seems wise, therefore, to preface all conclusions to this uncertain stage of our knowledge with an “if.”

“If” I had symptoms suggestive of gallbladder disease, I would—first of all—secure an experienced clinician that would properly evaluate the history and the physical findings; this to be supplemented not only by routine functional tests such as the icterus index and the Van den Berg test, but also a Galactose Tolerance Test, and a test for urobilinogen in the urine; this to be followed of course by the Graham-Cole procedure of studying the gall bladder.

“If” gallbladder disease was demonstrated with an non-functioning or poorly functioning gallbladder, even with stones and particularly small cholesterol stones, I would want a period of medical management, which would consist of a high carbohydrate diet, low proteins, and only such fats as come from butter, milk, and cream; and at the same time give ketocholanic acids. In my experience, as well as in the experience of many others, not only are symptoms relieved by such a line of treatment, but many times the gallbladder will be restored so that it functions normally, and occasionally small cholesterol stones will disappear.

“If” the symptoms should increase and become associated with chills, fever, and jaundice, I should want the abdomen opened, but not until an hippuric acid or a brom-sulphthalein liver test was done, as well as a determination of the bleeding and coagulation time, and a careful consideration of the heart and kidneys; unless of course an emergency was definitely indicated. I should want a capable surgeon that had no preconceived ideas of what he was to do until the gallbladder was exposed. Recognizing the important function of carbohydrate metabolism, I should want plenty of glucose administered before the abdomen was opened.

“If” it is true that the cholecystostomized gall bladder does regain its function, and certainly it does many times, then unless a gangrenous gall bladder or a gall bladder showing far advanced infection in its walls, I would want the stones,

In bodily recovery, it is well to remember that if present, removed and the gallbladder drained, and in the case of an associated pancreatitis this to continue possibly for weeks, or even months.

"If" I withstood the surgical shock, I would want a capable clinician to give me sugar, sugar, and more sugar, and very little protein, and very little easily digestible fats.

"If" my condition grew worse and something seemed to have interfered with drainage, or, infection was indicated, I would want a cholangiogram to determine the potency of the common duct and hepatic radicals.

"If" these things were done, I believe I would live in greater comfort than if any other form of treatment had been employed.

"If" I did not recover, no matter where I happened to be in the hereafter, I would look back and say "I believe that I had the best that medical science of the day had to offer."

Irvin Abell: There are two points I wish to discuss, both of which have been mentioned by Dr. Sherrill, Dr. Simpson and Dr. Dowden. The first one concerns the indications for treatment in non-calculus cholecystitis. It is assumed that the diagnosis has been confirmed by the history, by the physical findings and by the various laboratory studies. It is in this particular type of cholecystitis that the greatest number of disappointing results from surgery has been noted. I personally feel that all such should be given the benefit of rather long continued medical and dietary treatment. When it has been demonstrated that such a regime is a failure and the patient continues to suffer both local pain and digestive disturbance, it is my opinion that surgical treatment should be considered.

The second point concerns the best course to pursue when stones are known to be present. Regardless of the presence or absence of symptoms referable to them, in the light of our experience they must be regarded as potential sources of danger. Our records show 20 cases of primary carcinoma of the gall bladder, all of which showed the presence of stones, bearing out the quite general belief that malignant disease is superimposed upon the long continued irritation caused by stones. Our records also show 30 cases of acute pancreatitis, in 20 of which stones were present. While I do not know the exact number of cases of subacute pancreatitis in our files, stones were present in approximately 80 per cent. In 50 cases of cancer of the pancreas stones were present in the gall bladder in 10. In the series of 200 cases which Dr. Irvin Abell, Jr., has reported, there were 19 cases of acute cholecystitis, gangrene, or empyema, all of which showed the presence of stones; there were in addition 17 cases which presented

advanced biliary tract pathology and in all of these stones were present in the gall bladder. I am confident that a study of the entire number of cases in our files would show similar findings. This experience and observation has led me to believe that when the age and physical condition of the patient does not prohibit an operation of this magnitude, the removal of the stones will enhance the safety of the patient, giving protection against such disastrous lesions as have been mentioned.

Irvin Abell, Jr.: The late Dr. Judd established the fact that of all patients operated on for biliary tract disease twenty per cent are found to have extensive pathological changes in the liver, common duct, and pancreas; and that these conditions greatly increase both morbidity and mortality. In 200 consecutive procedures upon the biliary tract we have seen seventeen cases in which these extensive changes have occurred. Five of these developed a postoperative pancreatitis, the complication of biliary tract surgery which I wish to discuss.

The possibility of such a complication developing is recognized at the operating table when the surgeon palpates an enlarged firm pancreas and identifies extensive pathological changes in the liver and common duct. On the third to the seventh day the condition discloses its presence by a characteristic type of nausea. This nausea is mild but constant, is associated with interval vomiting, and is influenced by no treatment. Drugs, stomach lavage, nothing by mouth, and all other measures are equally useless. There is no pain, no fever, and no leucocytosis. The onset is insidious, the nausea persists for days, and the recovery if it occurs is sudden, the nausea disappearing completely within a few hours. There is little to be done besides offering the patient support in the form of intravenous glucose, intravenous chlorides, and repeated transfusions. As the end approaches a hemorrhagic tendency develops. This responds but poorly to ordinary measures. Of the three to begin bleeding into the biliary drainage, from around the drainage tract, and from the gastro-intestinal tract only one who received large doses of Vitamin K and bile salts survived.

All five cases had extensive pathological changes in the biliary tract. Of the three who died one suffered from the pancreatitis for 27 days, one for 28 days, and one for 36 days. All died of a terminal bronchopneumonia, two of them having suffered from a hemorrhagic tendency several days prior to death. The two who recovered did so after 21 and 24 days of nausea and vomiting.

If the possibility of this complication is present, the family should be told immediately after

the operation. When the nausea begins and persists for several days, the situation must be discussed with definite emphasis being placed upon the prognosis and the poor results of available treatments. Unless this is done, at the end of three weeks after all treatment has failed to alleviate the nausea the confidence of the patient and the patient's family in the attending physician suffers. And the patient's confidence in his ultimate recovery is just as essential as are the repeated blood transfusions. Support to the patient's morale as well as to his food and water supply is required until nature either succumbs to or conquers the pancreatitis.

It is to be noted that in these cases nature is from the very beginning at a disadvantage. These patients who are in the upper age group have been ill for a period of years. Their operation results not from some mild disturbance of the gastrointestinal tract but from severe painful clinical symptoms which force them to seek relief. They enter the operating room with poorly functioning livers and impaired cardio-renal systems. And then for a period of three to four weeks they are nauseated and unable to take nourishment. The prognosis in this form of pancreatitis is always guarded and unusually poor.

George A. Hendon: I am chiefly concerned with increasing the margin of safety before the operation is undertaken. Naturally this will be achieved if one makes a detailed and careful study of the patient.

If you wish to consider as an ingredient of this plan the administration of glucose, I can tell you that you can grade the rate of its intravenous administration by the temperature of the patient. If the temperature increases from what it is when you start, you may know you are giving the glucose too fast. If you start at normal and it rises then you are giving it too fast. The rate of delivery runs to thirty drops of 10% solution to the minute.

Another point, I have found it to be greatly to an advantage to have the glucose dissolved in calcium gluconate solution. I have prevailed on a manufacturing concern to put it up with one gramme of calcium gluconate to the pint. You can give it that way at the rate I have indicated.

After the operation, continuous negative pressure is always employed. The cholecystostomy lends itself more kindly than cholecystectomy. By attaching a suction nozzle to the drainage tube in the gallbladder or the gallduct, remarkable results can be obtained. Seven and one-

half centimeters of pressure are maintained (the amount that will raise mercury $7\frac{1}{2}$ cm. in height) can be kept on the patient through his entire hospital residence. They do not know it is there and it does not cause discomfort. Very much sooner you can expect to see the honey colored bile appear. This is for the purpose of eradicating all the debris in the radicals. I have pulled out stones of small size inadvertently left at operation.

Misch Casper: As these papers, which were well presented and very well discussed, covered the field thoroughly, I shall confine myself to one or two points. Dr. Simpson has remarked about diet. It would be a great help to all surgeons if the obese patients, with whom they have to wrestle in operative work, were to be thoroughly dieted ten years before they require operation for acute gallbladder disease. Some of them could be prevented from going from a medical to a surgical condition.

Another point, gallstones are always potentially dangerous, the smaller the more dangerous because they will migrate.

The surgeon who attacks bellies of any kind should have extensive training, especially in gallbladder cases. In pancreatic cases he is running into something dangerous. Surgery of the pancreas requires surgical skill. Gallbladder cases can be easy, or the most difficult surgery. Will Mayo always said that there are no such things as innocent gallstones, but that we do have innocent doctors.

It is surprising how much pathology there is sometimes without symptoms. One woman with a fibroid had it removed. She also had symptomless gallstones, and came back with empyema of the gallbladder, still symptomless. One stone was buried in the cystic duct. There were no symptoms except that I felt the stones at operation. Of course, they could have been found by X-ray, the free use of which in identifying gallbladder disease is one of great practical use.

Emil K. Mosny: Practically all the discussions this evening about gallbladder disease have been surgical. This is to be from an internist's point of view as to the consideration of a high fat diet. I have used this on about eight cases at the Marine Hospital and the results have been rather encouraging in cases of non-calculous chronic cholecystitis. The purpose of the fat is to stimulate the emptying of the gallbladder and thus promote a more or less natural drainage. Other materials which will produce a similar type of drainage are magnesium sulphate, sodium sulphate, or phosphate solutions. Probably there are some other men in this

audience who have tried this form of drainage and will state their results.

J. Garland Sherrill (in closing): The courtesy shown in your discussion is appreciated and I feel complimented on the lack of contention although a bit of argument adds to the zest. Dr. Abell's view was well expressed and quite to the point.

Dr. William J. Mayo reported (*Annals of Surgery*, 1906, Vol. 44) fifteen-hundred operations performed between June 24, 1891, and May 1, 1906 upon the gallbladder and bile passages, of which number 96% were operated upon in St. Mary's Hospital, Rochester, and under nearly identical conditions.

One thousand of these cases were presented in a paper read before the Southern Surgical and Gynecological Association in December, 1904, and will be found in the transactions of that year. He considers the mortality, the permanence of cure and the disability arising from the operation itself. The mortality in the fifteen hundred operations was 4.43% (sixty-six deaths) in the first one thousand cases, and 3.2% in the last five hundred, since that time 3.2%.

In the first series of one thousand cases, 845 cholecystostomies showed a mortality of 2.13%; in the last series of five hundred there were 272 cholecystostomies with a mortality of 1.47%.

"Looked at from the standpoint of mortality, cholecystostomy is the safest for the average case and must be considered the normal operation." He also says, "Thick-walled gallbladders which have become functionless lead to a suspicion of malignant disease and should be excised. We have in this way several times unexpectedly removed what proved to be an early carcinoma of the gall bladder."

THE STORK

O, bird that spans the ocean
From coast to continent;
What hast thou of a notion,
On what mission art thou bent?

It is but to cheer some mother,
Low-spirited, undone,
With a sister or a brother
For her darling little son?

And the answer, 'No, another
Will be pleased to hear from me.'
'Is it father, sister, brother?'
'No, the 'Doc.'—if there's a fee.'

J. F. GARVEY, Carrollton.

SOME PRACTICAL ASPECTS OF CHILDREN'S PROBLEMS

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Dr. Edwards A. Park, Professor of Pediatrics, Johns Hopkins University, in a preface to Dr. Leo Kanner's "Child Psychiatry" writes, "In the fast changing medicine of today the pediatrician remains the grand example of the general practitioner. Though primarily an internist, he finds himself in turn dermatologist, otologist and neurologist. Moreover, of all classes of physicians the pediatrician is perhaps most nearly the ideal, since of necessity his work is so preeminently concerned with preventive medicine. He enters the home to advise in regard to the preservation of health as often as to meet the problems of disease. He discusses school work, clothing, companions, habits of exercise and sleep as well as diet and protection against the contagious diseases.

Because the pediatrician has this intimate family relationship and these special responsibilities, it is to him that the problems of abnormal behavior first come. In the struggle which the child wages continually for his place under the sun, the pediatrician holds the strategic position, for he is the only trained observer on the field. He alone has the chance to encounter personality difficulties in their incipency. In the past we pediatricians have not been accustomed to regard the healthy development of the child's personality as our responsibility. With the continued growth of knowledge concerning the child the pediatrician can no longer escape this obligation; no one else is in the position to assume it. "Mens sana in corpore sano" is for him in particular both precept and goal.

If, then, the pediatrician is to fulfill his function completely, he must understand the child through and through as a living, acting, feeling, choosing being. He must be able to pick out reactions which are unhealthy and to know that they are fraught with ultimate danger, while scarcely more than tendencies or trends. He must be able to gauge the intelligence of the child and to estimate the emotional make-up, in order to be able to judge the capacity for healthy

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development. Since the fault lies as often in the environment as in the child, the pediatrician must understand also parents, teachers, and all those surrounding the child. Finally, like all general practitioners he must know himself well enough to be able to judge when to attack the problem in person and when to seek for aid."

I quote this at length, for nowhere have I been able to find a more succinct formulation of the pediatrician's position and attitude. What I should like to be able to tell you today is just exactly what you can do to cure, or at least, ameliorate thumbsucking, nailbiting, bedwetting, stealing, lying, running away, or any of the other common forms of behavior disorder. Much as I should like to do this, I realize at the outset that some of the suggested handling will seem lengthy and time consuming to the point of supposed impracticability. I am also completely aware that you desire, as do we all, to know some simple, practical shortent toward the complete alleviation of these symptoms. It would be a happy circumstance, indeed, if we could take these little patients through some course of drug therapy or minor operative procedure and completely do away with an annoying tic or a feeding problem. However, this, to the best of psychiatric knowledge today, is impossible. What, then, can we do? We can look upon every child as an individual who needs some sort of help which we, as physicians, are qualified to give him. We cannot completely cure every patient we see, but there is always something to be done to ameliorate an undesirable condition. We shall not attempt to deal with any particular school of thought nor to concern ourselves with philosophical ruminations on various behavioristic attitudes. We shall deal only with the practical working facts which then immediately preclude a need for a specialized terminology as well as a specialized and too often occult therapy. In short, we shall concern ourselves only with some practical aspects of children's problems.

We first set about to determine all the facts involved just as we would if a child were brought to us complaining of a pain in the abdomen. It is inadvisable to see the parent and the child together, as we do not want to have a three sided discussion of the child's difficulty. We obtain the complaint, personal history and social background from the parent alone, so that all of the pertinent facts may be obtained without further injuring the child. By the same token, it is well to examine the child, both physically and what might be termed

psychiatrically, away from the mother's presence. It is a rare circumstance, indeed, when child and parent cannot be seen separately, if the whole problem has been approached from the very start in a spirit of friendly helpfulness. The needs for obtaining full and chronologically accurate histories are quite apparent, but in any sort of behavior problem this need is possibly even greater. Having obtained all the information from the parent the physician then gives the child a complete physical examination, including whatever laboratory work is felt necessary, always taking care to remember that children respect honesty, not as a moral concept, but as something upon which they can depend and thereby are made more secure and comfortable. Therefore, if a blood test is indicated, a moment's explanation of the need you feel, and of the expected discomfort will do more to establish rapport with a little patient than all the toys in the world. Having, then, satisfied yourself concerning the patient's physical status, it is well to get an estimate by the patient of his problem: Is he aware of a problem? What is his attitude toward it; to his home, parents, playmates, etc.? Most psychiatrists determine the patient's intellectual capacity by means of the Stanford Revision of the Binet-Simon Test. This gives us a so-called Intelligence Quotient, the obtaining of which is not a tremendously specialized procedure, nor is it a gauge of adaptability. It is simply a method of determining by well worked out scales the relative intellectual endowment of the child. It is nothing more nor less than that, and may or may not be entirely dissociated from the behavior problem presented. For instance: if we have a child whose intelligence quotient places him on a four year level, attempting to do sixth grade work and who, under parental pressure, works very diligently at his studies but develops a tic or some other so-called functional disability, we are immediately able to see a source of his particular difficulty. To be sure, there are many psychological tests which require special training, not only for their application but also for their interpretation. This, in general, is not necessarily true of the relatively simple Binet-Simon Test, if we understand its true value. Having determined the historical data, the physical status, the intellectual endowment and the patient's mental status, we are then ready to talk again to the mother, but as before, not in the presence of the child. At this time we make known the needs which we feel for further information, concerning school, community, play groups, church as-

sociations or other environmental factors. If we feel any further medical needs, such as chest plates, encephalograms, or spinal fluid studies, they too are explained to the parent. Then, a common sense formulation of the case in non-medical terms is made, taking great care never to threaten a parent with a lecture-like admonition or rebuke, for most parents, like ourselves, will have done the best they know how and they, like ourselves, are not too well equipped to receive rebuke or to have mistakes pointed out in an unkind manner. It will be immediately apparent that no one factor is entirely at fault. There will be many which enter into the total picture; some of them modifiable, others relatively unmodifiable. It will not help this child to think of him in terms of hysteria, psychoneurosis, or other similar appellations. Certainly, a much more workable attitude would be a diagnostic re-formulation, such as Dr. Leo Kanner advocates: "Stubbornness, temper tantrums and crying spells in a healthy, normally intelligent three year old girl with internal strabismus and signs of old rickets, beaten and nagged by an unintelligent, deaf mother who is disappointed in her married life," or "a physically and mentally healthy, well adjusted seven year old boy, handicapped by a moody, emotionally unstable mother who has branded him as a 'feeding problem,' and changes schools, doctors and 'diets' almost every week." Thinking of a child in this manner immediately puts a more hopeful attitude to the fore with consequent better results. We are now ready for the treatment of this individual.

By this time you will undoubtedly know a great deal more about your patient than you ever did before and certain treatment possibilities will have suggested themselves. Others may have to wait upon further developments in the case, a mutual trust and understanding between yourself and the patient and increased parental cooperation. Thus far we see that there is no real trick to handling children's behavior problems. It is simply an intelligent attempt at understanding the factors involved. Then, it is within our medical province to decide which of these factors are what we might call modifiable and which ones cannot be changed completely. This further simplifies our projected treatment. From a physical standpoint, it is our province, as physicians, to treat behavior disorders regardless of their association with physical disease. We can no longer salve our medical consciences by saying that a certain child is irritable,

simply because he has an upset stomach or mild tonsillitis, nor can we ignore the presence of tonsillitis in a behavior problem. It is our job to put our patient in as good physical condition as possible. It may well be that a child whose complaint is enuresis may be in need of a tonsillectomy, circumcision, or vitamin therapy, but it would be a medical fallacy to assume that any one of these things alone is the isolated cause of the behavior problem. They most certainly enter into the picture, but again, only as a part of the whole, each part of which must be corrected to the best of our ability. We cannot limit ourselves or be satisfied with the one particular complaint which brings the patient to us. We must assume it to be a medical fact that a particular complaint is but an indication of a definite maladjustment which may seem unrelated to the isolated factor which brought the patient to us originally. In other words, we must treat the disease and not the symptoms.

As with any physical illness, our history, examination and diagnostic acumen will already have begun to outline the indicated treatment, so we come by thorough investigation of our behavior problems to understand these little folks as being pretty well organized personalities who have thoughts and feelings, who associate with playmates, schoolmates and family, who have likes and dislikes, all of which have entered into the situation as we see it at the moment. Very few people fail to cooperate in an intelligently directed attempt to alleviate an uncomfortable situation. Ofttimes we find factors in a family setting which seem practically unmodifiable, but it is well to maintain a hopeful attitude and to feel that at least a degree of amelioration is better than an attitude of hopelessness. If we feel a particular program outlined for a child is being blocked by a lack of understanding on the part of the parent, it will be small help to the child to make an entry in our notes concerning the stubbornness of the mother and let it go at that. We must insist upon various procedures for the good of the patient. It is well to be aware of the potential danger of carrying all our therapeutic eggs in one basket. We can hardly remain intellectually honest and explain to the parent that a tonsillectomy or some type of endocrine therapy will relieve, say, nail-biting. We know of no way to cure the feeble-minded, but we do know many ways of making the child more comfortable, such as reducing external pressure upon him to compete with people who have no such handicap. Further, we can no more guar-

antee that, if he should alleviate a stammerer's condition, it will not return, than we can assure a patient that once recovered from pneumonia, he will never have it again. Dr. Kanner says, "If we consider the limitations and utilize the assets existing in a child, the family and the total setting, we are doing the best that we can without having to look for perfectionism and without being bothered about permanent one hundred per cent cures." Having determined, then, thus far, the extent to which the child, parents and the total situation are modifiable; what we want to modify and how this can best be accomplished; what things might interfere with this plan and how those interferences can be overcome; and should these things be impractical, what is our next best plan, we are then ready for further treatment of the child which will consist of working with the child, the parents, the school or any other group with which it is necessary that he come in contact.

As far as specific therapeutic aids are concerned, they are very limited, but are definitely of benefit wherever indicated, as for instance: medication in such illnesses as migraine, epilepsy, cretinism or operative procedures as indicated. Mechanical restraints, such as thumb guards, "Taste Bad," elbow splints and others are to be discouraged for obvious reasons. They do not attack the problem, but rather tend to thwart and upset the child more. The use of the star chart is well known to all of you and is a healthy competitive means of helping the child overcome his difficulties, but even this has its abuses when used to defile and embarrass the child. The so-called conditioned response recently advocated for the treatment of enuresis has many obvious drawbacks. It consists, you recall, of an electrical apparatus placed in the child's bed, which when wet, causes the child to receive a shock or it may ring a bell or turn on a light. Suggestion and persuasion may be used judiciously. Achievement reward may be well in some cases if properly handled, but the reward must consistently be forthcoming. Above all, we must know all the facts concerning our patient, in order to intelligently help him.

With this attempt to outline the general consideration of all behavior problems, we shall now take up a few specifically. Enuresis is probably one of the most common complaints, due no doubt in a large measure, to its obvious demands upon the parent. Ties may be annoying, but with them it is not necessary to change the

sheets and turn the mattress, and as a consequence, they are more readily accepted by the parent. As pointed out, there is no one etiology of enuresis. We must not "treat the enuresis, but the enuretic child with all his difficulties." Treatment of enuresis which looks upon this as a disease and not a symptom must fail to get results. If a jealousy reaction prompts enuresis, all of the atrophine, bromides, quinine, camphor, thyroid or asafoetida in the world is not likely to stop the bedwetting, nor are circumcisions, tonsillectomy, lumbar puncture or molasses and sulphur. It is well not to forget that "a living person happens to be attached to the urinating bladder." First, we treat all physical difficulties which are really demonstrably present,—this, regardless of their relationship to the enuresis. Then we try to help the patient in his emotional and situational adjustment; to show him that bedwetting is not a crime and to relieve him of his shame and guilt. We debunk weak bladder, weak kidneys and weak nerves. We eliminate drugs and manipulations. We attempt to alleviate any other problems which he presents and at the same time deal with the family to do away with punishment and threats. We try to better conditions of cleanliness and sleeping arrangements; we insist upon the child being toileted during the night, usually two to three hours after retiring. Whenever advisable we do not hesitate to restrict the fluids nor to use the star chart. Cooperation is extremely important and if not immediately forthcoming, it is our job to work toward that end. Enuresis is not the worst thing in the world.

Feeding problems are not insurmountable. Here again physical illness must be investigated, specific allergies treated. The often feeding problems are parentally arranged. The parent's responsibility is to provide the food, the child's to eat it. The simplest method to handle this is to place the food before the child at meal time and after thirty minutes the dishes should be removed without comment, whether the child has eaten or not; nothing should be given between meals. Forcing the child to eat serves only to emphasize the importance attached to this in the parent's mind. Occasionally the star chart is a helpful adjunct. In a child who does not like certain things, we give him a small amount of everything and when he has eaten all the regularly prepared food, he may then have more of what he particularly likes. This, again, is completely in line with social custom. The parents must be treated oftentimes

more drastically than the children and be taught that missing one or two meals will not have fatal results.

"He plays with himself, Doctor; he practices self-abuse." "She puts her hand on her privates and rubs herself. I have slapped her hands and told her what would happen to her if she kept playing with herself." These complaints formulated in the parent's words give us good insight into their attitude toward masturbation. Too often this evidence of unrest and stress in little folks is made to assume importance all beyond its inherent worth. Sometimes a tactful questioning of the parent as to the dire results he or she experienced from this habit will bring a new understanding to the child's problem. The treatment here consists in the main of removing incorrect impressions concerning masturbation and its supposed devastating results. One does not advocate masturbation, simply because it is not physiological and is evidence of personality difficulty, but fortunately the dire ends predicted for masturbators do not come to pass. Such superstition must be eradicated. Sexual information should be given children when they ask for it and in terms which they can comprehend. All of you are quite aware that curiosity is inherent in surprisingly young children, and if, when his curiosity arises, it is satisfied by a direct answer, with no evasions and no elucidations, the child involved will be much more comfortable than the one who is hushed. As in the case of the nailbiter or thumbsucker, the child should not be punished, but the family should make an effort to distract him by giving him something pleasant and interesting to do. And, as with many other of the so-called behavior disorders, we handle them in a commonsense manner, based upon the facts we are capable of obtaining.

In conclusion, children are simply young adults, the like of which we ourselves were at one time, who have feelings, attitudes, ideas, likes and dislikes; who occasionally present problems disturbing to the home, the school or to themselves, which problems, as any other diagnostic conundrum, can most intelligently be handled by obtaining all of the facts available and applying commonsense medical knowledge towards their amelioration.

"The cares of today are seldom those of tomorrow; and when we lie down at night, we may safely say to most of our troubles, 'Ye have done your worst, and we shall see you no more.'"—Cowper.

SOME PRACTICAL THOUGHTS ABOUT "SINUS TROUBLE"

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The usual "cold" is quite commonplace to all of us. Seldom does it do more than make one feel a little "stuffy in the head," a bit dragged-out and somewhat grouchy. When we ourselves are affected, we are not apt to do anything special about it, knowing that the cold will leave us just about as quickly untreated as treated. The less phlegmatic of us may use nose drops on two or three occasions, and perhaps take a laxative. Some people use it for an excuse for several drinks of liquor. Most people have colds, and nearly all of them pay but little attention to them, which from a practical point of view, and not the ultra-scientific, would seem to be just the thing to do.

It is when a cold "hangs on and on" as people say that the individual seeks professional advice, and when he does so, we can feel justified in believing that there is at least a little involvement of one or more of the paranasal sinuses. It is quite reasonable to believe that when the mucous membrane of the nose is infected for a week or two, the mucous membrane of the ostia to the sinuses and of the sinuses themselves is in danger of becoming infected, since there is a great similarity in structure and function of the mucous membrane of these three localities. At this stage, medicinal shrinkage of the nasal mucous membrane, by providing better aeration and drainage of the nose and the ostia, aided by the patient's natural resistance to infection, may be quite adequate to effect a cure. Should the turgescence of the mucous membrane of the ostia lead to complete blockage, pain will result from one of two causes. The first is the "negative-pressure pain" in which, after total occlusion of the ostium the oxygen of the air within the sinus is partially absorbed, causing a reduction of the pressure within the sinus below normal pressure. Opening of the closed ostium, whether by sprays, packing or in conjunction with the suction machine will give spectacular relief, though the treatments may need to be repeated several times.

The second type of pain is the "positive-pressure pain," in which the exudate within the sinus, when propelled to the ostium by the cilia of the mucous membrane, finds the ostium closed, and the increasing of the exudate leads to increased

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pressure within the sinus. Here, also conservative measures are indicated and usually are adequate.

The eight sinuses are cavities within bones, lined with mucous membrane and connected with the nasal cavity by tubes, or ostia, of different lengths. The sizes of the different sinuses vary considerably. In the erect posture there is rather good gravity drainage from all of the sinuses except the maxillary, in which the ostia, far from entering the antra near their dependent portions, do so near their tops, which explains the relative frequency of chronic maxillary sinusitis. When the infection within a sinus leads to empyema of the sinus, the usual patient will almost demand that something be done, although it is almost unbelievable that in some cases there is little or no pain.

At the present time it is rather generally considered that chronic sinusitis is a more potent form of focal infection than was formerly believed, even though there may be rather free drainage through the natural ostium. The sinus mucous membrane may undergo much hypertrophy, even to the formation of large polyps or there may be a degenerative change of the mucous membrane with thinning, but either type can act as a nidus of infection.

In acute sinus trouble it is wise to attempt to overcome the infection promptly and thereby prevent deterioration to the chronic type. As much as we love Kentucky, we must admit that our climate is quite unfavorable to the mucous membrane of the nose and sinuses, because of our rapid changes in humidity and temperature. We are therefore working under a handicap, but not many of our patients can afford a month's jaunt to Florida.

The history of chronic sinusitis is quite typical; a former cold which the patient usually remembers definitely as it "hung on and on" with nasal discharge first as of water and later of muco-purulent and then purulent material, occasionally blood-tinged; a certain amount of it is gotten rid of by blowing, but much of it is felt to drop down toward the throat from the rear portion of the nose (the "post-nasal drip") and this may cause the patient to gag, and when it trickles down into the trachea and bronchi, to cough; there is sometimes anosmia or else a very unpleasant odor or taste. Examination of the nose will usually show engorgement of the mucous membrane near and below the ostium of the affected sinus and probably a purulent discharge. Post-rhinoscopic examination

will show swelling of the mucous membrane and a discharge. Transillumination of the frontal and maxillary sinuses is often highly suggestive, especially when but one of the four is opaque. However, we should remember that paired sinuses are not always of equal size, which may confuse the interpretation in doubtful cases, and we should bear in mind that a sinus may be translucent to transillumination with a thinned but chronically infected lining.

X-rays at angles best suited to study the sinuses are of definite value, particularly by the relatively new method of introducing a radiopaque, such as lipiodol. If the head is tilted straight back so that the chin is on the same vertical plane with the external auditory canals, a small amount of the solution introduced into the nose will cover the nasal ends of every sinus ostium, and if negative pressure is then applied in one nostril while the other nostril is closed with the finger while the patient voluntarily closes the glottis, a small amount of the air in an unobstructed sinus will be drawn into the nose, and a small amount of the radiopaque will be drawn into the sinus when the negative pressure is removed. In this manner a more reliable x-ray is available for study of conditions within the sinuses, relative to the thickness of the mucous membrane and the presence of polyps. If the ostium is closed, the substance cannot enter the sinus, furnishing further diagnostic aid. In some cases, if the above mentioned procedure is carried out at intervals, using an ephedrine solution, operation can be avoided.

The nasal septum usually plays a large part in the causation of sinus trouble in this climate. Most deviations of the septum are believed to be developmental in origin rather than traumatic, and manifest themselves by a transient or constant diminution in the breathing space of one side of the nose. When such a patient "catches cold" there is not so much room in the nasal cavity on that side for the swollen mucous membrane of the septum and of the projecting turbinates, with the result that partial or total occlusion of one or more ostia is more apt to result in such a patient even with a "slight cold" than in a person with free breathing space bilaterally. Therefore, any person in this climate who breathes considerably more freely through one nostril than the other and who has definite symptoms of sinus trouble after "slight colds" should be examined to determine if a submucous resection of a deviated septum is indicated.

Volumes have been written regarding al-

lergy in sinus conditions. In this short paper I will merely mention it without discussing it. Its recognition is fairly easy and its treatment quite difficult.

Empyema of the different sinuses differs remarkably in symptoms, complications and angles of attack. Pain is usual but not always pathognomonic in location. Drainage is certainly indicated, by conservative measures, if possible, otherwise by operative. Too often, conservative measures are not tried long enough. In many cases the frontal sinus can be irrigated with a curved trocar introduced through the nose. The antra are easily irrigated by penetrating the very thin bony portion under the lower turbinate. The sphenoid is very much more difficult to irrigate and the ethmoids impossible.

When the infection has been present a long time and if, despite repeated irrigations and other conservative measures, the process has not been improved adequately, operation should be considered, with two purposes in mind, as regards most of the sinuses; first: the providing of free drainage, and second, the removal of a mucous membrane overwhelmed by infection. When properly removed, the mucous membrane will regenerate, and if there is adequate aeration and drainage, recurrence of the trouble is quite unlikely. Poor operative results are too often from unjustified, or ill-performed operations and as a consequence, nasal surgery has fallen into disrepute, but when definitely indicated and properly performed, can, and does, give results comparable to those in the other fields of surgery.

Gastroduodenal Perforation.—Boneo and Ramirez's study of perforation of gastroduodenal ulcers is based on observations made in eighty-five cases during the last five years in the Pirovano Hospital. All patients but one were men. The authors conclude that perforation of gastroduodenal ulcers take place almost exclusively in men ranging in age from 30 to 40 years, after which it is rare. Perforation occurs more frequently in gastric than in duodenal ulcers and is most frequent in autumn and winter. In the group of patients seen by the authors, perforation took place within the third and sixth hours after ingestion of food or fluids. There was a history of gastric or duodenal disturbances in 94 per cent of the cases. The treatment then is surgical and urgent. It consists in simple suture of the perforation, with omentoplasty and without drainage, in patients in good general condition, with short hours of evolution of perforation and who do not show symptoms of peritoneal contamination.

LEAD POISONING IN INFANTS AND CHILDREN

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The subject of lead poisoning in infants and children has received intensive study in recent years. McKann states that it is a serious disorder of relatively common occurrence, characterized in the more severe intoxications by an encephalitic process often leading to a fatal termination or to a permanent cerebral injury.

The highest incidence is seen from one to three years of age and is explained by the fact that the baby is teething and puts everything into his or her mouth. The education of toy and baby furniture manufacturers has decreased the incidence from these sources, but woodwork, paint and other furniture are still a menace.

The degree of intoxication depends on the amount of lead ingested or inhaled and the length of period of exposure to lead. Encephalitis is more frequently seen as a result in children than in adults. Rapid removal of lead from the general circulation and storage in the bones is believed to play a favorable role. Rapid mobilization of stored lead has been proven to precipitate acute symptoms in a quiescent case. Febrile illness and acidosis will mobilize the metal which is carried in the blood presumably as a phosphate and deposited in the nervous system, liver, pancreas and back to the bone. Symptoms of lead poisoning may be absent at the time of ingestion, only to appear as long as two years after the source has been removed.

Lead may be taken into the system by (1) ingestion, (2) inhalation, (3) rarely by direct absorption through the skin. Some of the sources which have been reported as factors are lead nipple shields, water containing small amounts of lead from the plumbing system, fruit sprayed with lead containing insecticides, lead containing fumes from storage battery casing used as fuel, toys coated with lead paint, baby furniture and other furniture which has been painted, woodwork, lead used as a sweetener in certain foods and lead containing powders. Pica which is seen in mental deficient, neurotic, or anemic children or in those having intestinal parasites is an impor-

tant factor in some cases. Lead chromate dye on buns, and the use of lead acetate applications for poison oak also have supplied the toxic agent.

Manifestations of plumbism in children may be divided roughly into three groups:

(1) Symptoms and signs of gastrointestinal involvement.

(2) Symptoms and signs of cerebral involvement.

(3) Symptoms and signs due to blood change.

In general there is noted a pallor, weight loss and weakness. Irritability and fretfulness are usually the first indication that something is wrong. After this, there is frequently a gastro-intestinal upset characterized by anorexia, constipation, abdominal cramps and vomiting. Vomiting may be the only symptom present in early cases of lead poisoning.

When encephalitis is a prominent feature, the symptoms are somewhat difficult. The onset is marked by some change in the mental state and frequent persistent vomiting which is projectile in type. Convulsions of long protracted nature and hard to control, usually of the general type are the most frequent type of cerebral manifestation. Even after control of general convulsion, twitching of hands continue in some cases. Visual disturbances occur and there are altered pulse and respiratory rates with a slowing of both. Stupor and delirium may follow. Choked optic discs are frequently seen, and in a few cases separation of the cranial sutures has occurred. Fever may occur due to the encephalitis with disturbance of the heat control center in the brain. In cases where encephalitis has been a dominant feature, there is found an edema of the brain with the convolutions flattened, ventricles small and markedly increased intracranial pressure. The effect may be directly on the nerves or by decreased circulation due to the obliteration of the vessels by increased pressure. Peripheral neuritis is occasionally seen in the age group from four to seven years of age. The spinal fluid is clear and colorless, with globulin present and an increase in total protein content. Sugar level is normal and there may be a slight increase in lymphocytes. Severe acute attacks may leave permanent blindness. Cerebral palsy, epileptiform attacks and mental deficiency may result.

The blood picture shows a variable degree of anemia, stippling, polychromatophilia, poikilocytosis, and anisocytosis. Aub showed that lead anemia was due to abnormal destruction of red blood cells and not to diminished production in the blood except in the last stages of plumbism when a degeneration of the bone marrow may occur. These cells lose their normal stickiness and are no longer agglutinated by other sera, thus accounting for some of the unexplained reactions recorded on transfusing patients. The loss in circulating red blood cells is compensated by a regeneration of erythrocytes, but many of these are affected by lead as soon as they enter the circulation so that their basophilic substance is coagulated and then they become known as stippled cells. Stippling is greatest during the acute stage of the lead poisoning. Hemorrhage in the intestines may be due to irritation by lead. When the kidneys are affected, albuminuria, hematuria and glycosuria may occur. Glycosuria may be due to injury of pancreas or cerebral in origin.

One of the most constant findings in lead poisoning is a heavy band of increased density at the growing ends of long bones as demonstrated by X-ray. The laying down of lead is favored at sites where bone growth is rapid and so the anterior ends of the ribs, particularly the middle six, show increased density. The lower ends of the femur, radius, and ulna, upper end of the humerus, and both ends of the tibia and fibula are favorite locations. Vander Plaats-Keyzer believes that the increased absorption of the Roentgen-rays at these points can be attributed to deposition of calcium instead of lead. The width of the epiphyseal lines depends on the amount of growth which has taken place during period of lead ingestion. These lines may be produced by phosphorus, bismuth poisoning, healing and healed rickets, marble bones, scurvy and in cases where bone growth has ceased as in cretinism. The finding of a lead line along the margin of the gums is rarely seen in children.

Shelling found that sodium phosphate protected animals against the ill effect of lead. This form of therapy provides sufficient phosphate for deposition of calcium and insoluble lead dibasic phosphate in the skeletal system, for the excretion of lead as a relatively non-toxic lead phosphate and also for the formation of a colloidal lead phosphate in the blood.

Aub and his associates noted that the phosphate in the serum protects the red blood cells from the action of lead.

I wish to present the two following cases of lead encephalitis:

W. D., colored male, one year of age, admitted Dec. 12, 1938, history of good health until morning of admission, when he had a convulsion. Mother stated that battery boxes were being burned as fuel in the house. Temperature 93.4 on admission. Child exhibited clonic contractions of extremities, rolling of eyes and shifting of head from side to side. On December 17, 1938, after being symptom free for five days, child had a series of convulsions again. Spinal puncture on admission showed fluid clear, under pressure, three plus globulin and 10 cells, mostly lymphocytes. On December 17, 1938, spinal puncture showed increased pressure, heavy trace of globulin, 27 lymphocytes, and 3 polys. Blood smear was positive for basophilic stippling. X-rays of bones showed definite evidence of lead intoxication. Diagnosis of lead encephalitis was made. Patient discharged January 12, 1939, in good condition.

G. T., colored female, 3½ years of age, admitted December 15, 1938, with history of occasional vomiting for four weeks before admission. For two days before admission burning sensation in abdomen was present. On December 15, 1938, about 11 A.M., child started having convulsions, which were still present on admission at 4:30 P.M. Family had been burning battery boxes for past three months. On examination she was unconscious and convulsing. Pupils were dilated and reacted sluggishly to light. Both arms and legs were slightly spastic. Spinal fluid showed increased pressure three plus globulin and 10 cells.

Blood examination revealed basophilic stippling and moderately severe anemia. X-rays of long bones were consistent with lead poisoning. While in the hospital twitching and convulsions occurred for four days. She was quite irritable and fretful until discharge on January 17, 1939. Since discharge from hospital, she has been followed in clinic. She has been very nervous and irritable. In fact, only slight improvement has been noticed in her mental condition. She is below her previous mental age and walks with a staggering gait.

Lead is found in the urine and feces

of normal persons, and so unless a quantitative analysis is done, the finding is of little value. Daily excretion of lead in urine varies between .02 to .08 mgm. per liter or .05 to .1 mgm. per 24 hours. It is impossible to base prognosis of mild or inactive chronic lead poisoning on the urinary lead output, especially since these values will be influenced by such factors, which may influence the character and amount of urine excreted among which are diseases of the kidneys, dehydration, inhibition and edema.

Role that feces plays in elimination of lead is of little diagnostic value since many investigators have shown that it serves as a medium for the elimination of unabsorbed ingested lead from the alimentary tract.

In differential diagnosis, a diagnosis can usually be made by a good history and physical examination, together with a study of the blood for stippled cells and demonstration by X-ray of lead lines in the long bones. Lead neuritis is usually confused with postdiphtheritic paralysis, poliomyelitis and rheumatic fever. The sudden development of flaccid paralysis in a patient who presents a febrile illness with signs of meningeal irritation accompanied by characteristic spinal fluid findings makes the diagnosis of poliomyelitis relatively simple. Post diphtheric paralysis may be recognized by the history of the preceding throat infection, and the interval between the acute infection and the onset of the paralysis. Rheumatic fever may be evident by the presence of the joint pains or of cardiac involvement.

With lead encephalitis, brain tumor, brain abscess, tuberculous meningitis, and meningismus must be considered. Purulent meningitis shows a completely different picture. In tuberculous meningitis the presence of a focus elsewhere in the body may clarify the situation.

The prognosis depends largely on the stage at which the diagnosis is made. Presence of encephalitis increases mortality. Permanent cerebral sequelae are frequently seen in patients who survive the acute attack. In a series of cases by McKann 55% of the cases had encephalitis. Of these with encephalitis 25% died, 35% were left with permanent neurological sequelae. About 15% were free from severe symptoms and represented in greater or less degree cases of latent lead poisoning.

In the treatment of lead poisoning, the important step is to put a stop to ingestion, inhalation or contact with lead. Manufacturers have been taught to use vegetable paints. In the active treatment, it has been found necessary to wrap the crib with gauze and remove all toys coated with lead paint. Next step is to relieve symptoms and this is best accomplished by decreasing the resorption from the bones into the blood stream and stimulating the laying down of the mobilized lead in the bones. The efficacy of the measure has not been definitely proven for the mere removal of the source will often cause improvement of the symptoms. Some authors advocate removal of lead from the bones but this is considered dangerous in that there is frequently the precipitation of acute attack. Acidosis will cause the lead to be thrown into the circulation, and thus produce neurological symptoms. Kowaloff showed that the administration of a phosphorus rich diet is the rational treatment of acute lead poisoning. Patients with lead encephalitis were first treated for convulsions. Later were given 10 c.c. of 10% di-sodium phosphate three times daily. Lead deposits in the brain cause intense edema which is very resistant to treatment. Thus we can see that the attack on lead poisoning has to be made through prophylactic measures.

SUMMARY

History of ingestion of lead; long protracted convulsions; X-ray of long bones; spinal fluid changes with 2 to 3 plus globulin and slight increase in cells; and stippling of red blood cells are the salient points in the diagnosis of lead poisoning. Let me again stress that any attempts to mobilize the lead will lead in most cases to neurological symptoms.

REVEAL CHILD'S ADOPTION EARLY

Adopted children should be informed of their adoption as early as they are able to understand it, The Journal of the American Medical Association advises.

"The common technic used," The Journal says, "is to tell them that whereas most of their friends had to be accepted, their foster parents picked them out and chose them from a group of children and liked them best. That usually pleases the child and helps break the ice."

THE PATHOGENESIS OF ANEMIA: ANEMIA AS A PROBLEM FOR THE NEURO-PSYCHIATRIST

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"The whole is equal to the sum of all its parts" is as much a truism in medicine as in mathematics. The neuro-psychiatrist no longer looks upon the psyche and the soma as separable parts, each at times more important than the individual patient. He is aware of the fact that a healthy mental status is dependent upon healthy somatic functions and, conversely, that the physiological activities of the somatic organs depend upon a healthy affective state. It is no longer permissible to speak of a sick person as presenting a "clinical" problem when demonstrable organic lesions are present and as a neuro-psychiatric problem when no such lesions can be found. Despite its title, therefore, this paper is addressed as much to the general practitioner as to the neuro-psychiatrist.

There are several ways in which the "inter-personal relations" of a patient may be affected by an anemic state. They may be summarized under four headings:

1. Anemia during school age.
2. Anemia and the psycho-neuroses.
3. Neurologic changes due to anemia.
4. Anemia and the psychoses.

Anemia During Childhood: It has long been a source of wonder to the writer that while much has been made of the malevolent effect on school children of poor vision, defective hearing or stammering, little is made of the profound psychologic influence anemia may exert upon children. Many a child in need only of ferrous salts, has been punished for waywardness or referred to a psychologist to ascertain his intelligence quotient. Many a boy has been labelled delicate or a tuberculous suspect and barred from participation in sport, when the need was for iron and more iron, not milk and spinach, dietaries notoriously poor in available iron. Who can estimate the effects a regime of enforced idleness may exert upon the character of a child, or the baneful effects of unmerited disciplinary measures exacted during the formative period of life? If there is any

truth in Adler's concept of inferiority and exaggerated compensatory defense mechanisms, more than an occasional socio-economic failure had its start in an unrecognized nutritional anemia during childhood. The clinical implications are clear—any child referred to a physician as a "problem child" should be carefully examined for evidences of a nutritional anemia.

Anemia and the Psychoneuroses: The symptoms due to anemia are compared to those of the psychoneuroses in Table I. It is obvious that they are sufficiently similar to confound the unwary. This is the more likely because all too often examination of the blood is relegated to insufficiently trained or routine-burdened technicians. Since the psychoneuroses and anemia have so many symptoms in common, their differentiation depends upon a meticulously careful hematologic, physical and mental examination. Idiopathic hypochromic anemia, for instance, is common in women aged 30 to 50 years. Davidson and Fullerton found it in almost fifty per cent of a large series of women over 30. The disease is insidious in onset and is probably preceded for some years by achlorhydria or hypochlorhydria. It is not unreasonable to believe, therefore, that vague digestive

symptoms may occur during a latent period preceding demonstrable hematologic changes. Then the age incidence of hypochromic anemia would correspond closely to that of the psychoneuroses. In this type of anemia the red cell count is usually reduced but slightly (4.8 to 3.2 million per cu. mm.), so an inexperienced observer may easily overlook the anemia. The appearance of the red blood cells in a stained smear is characteristic—the cells have a pale central zone surrounded by a narrow rim of hemoglobinized stroma. This is the anemia, moreover, in which koilonychia and brittle, concave nails are common, but physicians seldom examine a patient's nails. It is strange that an anemia accompanied by a relatively high red cell count can occasion such marked distress while in pernicious anemia there may be but little discomfort with a cell count of less than 2.5 million per cu. mm. The clinical application, however, is again clear—an iron deficiency anemia should be ruled out (especially in women) before entertaining a diagnosis of psychoneurosis.

Neurologic Changes Due to Anemia: Pernicious anemia and anemia associated with pellagra and with lead poisoning are the ones most commonly accompanied by neurologic changes. It is well to keep

TABLE I

A Comparison of the Symptomatic Manifestations of the Psychoneuroses and of Some Types of Anemia

Symptoms of the Psychoneuroses:	Symptoms of Various Types of Anemia			
	Idiopathic Hypochrom. Anemia	Pernicious Anemia	Pellagra	Lead Poisoning
Weakness, tiredness	Weakness	Ataxia	Anorexia	Abdominal colic
Confusion	Lassitude	Confusion	Nausea	Tremors
Inability to concentrate	Tiredness	Memory defects	Dyspepsia	Myalgia
Irritability	Nervousness	Depression	Constipation	Neuralgia
Nervousness	Irritability	Delusions	Diarrhea	Twitchings
Memory defects	Confusion	Altered reflexes	Apathy	Nausea
Delusions, hallucinations	Headache	Paraplegia	Delirium	Vomiting
Apathy	Paresthesia	Paresthesia	Confusion	Weakness
Headache	Numbness	Paralysis	Irritability	Nervousness
Blurred vision	Dyspnea	Girdle pains	Memory defects	Insomnia
Tinnitus, dizziness	Pallor	Gastric crises	Paresthesia	Ataxia
"Stocking" anesthesia	Palpitation	Increased fatigability	Ataxia	Paralysis
Paresthesia, Hyperesthesia	Tachycardia	Anorexia	Crises	Crises
Dysphagia	Anorexia	Dyspepsia		
Disturbed reflexes	Eruptions	Dyspnea		
Tremors, twitchings	Constipation			
Neuralgic pain	Diarrhea			
Hypomanic states	Dysphagia			
Paralysis	Menstrual disorders			
Anorexia				
Dyspepsia, eructations				
Nausea, vomiting				
Constipation, diarrhea				
Tachycardia, palpitation				
Blushing, pallor				
Cold skin				
Dyspnea				
Menstrual disorders				

in mind that in pernicious anemia some of the neurologic changes are due to involvement of the peripheral nerves rather than of the cord (Vaughan). Ataxia, hypotonia and absent reflexes indicate involvement of the posterior columns; spasticity, increased reflexes and hyper-tonia, of the lateral columns. There may also be cerebral symptoms—depression, manic episodes, delusions. Paresthesia, tingling numbness and loss of vibratory sense may appear early. Strauss and his associates have shown that the cord changes are not irreversible and this observation has been confirmed repeatedly. More important still is this fact: pernicious anemia is not curable in the strict sense of the word. The patient should therefore be warned of the need of maintenance treatment for the balance of his life. Pernicious anemia patients commonly experience such marked relief soon after specific therapy is instituted that they may believe themselves cured before complete remission of the disease. Involvement of the cord is especially common in patients whose red cell count remains at a level of 4.0 million cells or less per cu. mm. Every effort should be made to keep the red cell count above 4.0 million cells per cu. mm. Pellagra may cause profound mental changes—depression, melancholia, irritability or manic episodes—as well as paresthesia and ataxia. The mental changes may overshadow the hematologic. Lead poisoning is accompanied by increased fatigability, insomnia, weakness, abdominal pain and palsies of variable distribution. There may also be an encephalopathy indicated by depression, memory defect, irritability or epileptiform convulsions. The anemia may be slight even though the symptoms are severe. The red blood cells seldom fall below 3.0 million per cu. mm. and the hemoglobin is not greatly reduced. The hematologic diagnosis will be missed unless stained smears are examined carefully for stippled cells (punctate basophilia.)

Anemia in Psychotic Patients: Institutionalized patients sometimes require tube feeding for prolonged periods. These feedings of necessity are liquid in character and commonly consist of milk, eggs and sugar. Body weight is a poor indication of the inadequacy of such a diet, since a negative protein balance induces edema which conveys a false impression of good nutrition. From the hemato-

logic point of view, the diet lacks Castle's anti-anemic factor, iron and ascorbic acid. These should be added and the patient's blood should be examined at frequent intervals. It is known that physical improvement often precedes remission of mental symptoms and every effort should be made to conserve the physical well being of psychotic patients. Parenthetically, phlebotomy may be of value in psychiatric practice. Removal of small quantities of blood at frequent intervals and under controlled conditions may well act as a stimulant for hematopoiesis and indirectly may make for physical and mental improvement.

SUMMARY

Anemia during childhood may affect the psychic development profoundly. Unless kept in mind, it may be missed because the anemia is masked by symptoms suggestive of mental rather than physical maladjustment.

Anemia may easily be mistaken for psychoneurosis because of the similarity of the symptoms of the two conditions.

Some anemias are accompanied by neurologic changes which may overshadow the hematologic.

Psychotic patients in need of feeding by stomach tube, may develop a nutritional anemia unless precautions are taken to supplement their diet with anti-anemic substances.

Relation of Carbon Dioxide to Artificial Respiration.—Johnson points out that a modification of the Schafer prone pressure method has been proposed by Hederer. An evaluation of this method has indicated the possibility of increasing the pulmonary ventilation in the Schafer method by more than 10 per cent. The great sensitivity of the respiratory center to carbon dioxide is well attested by the fact that artificial respiration applied to the extent of lowering the alveolar carbon dioxide as little as 0.2 per cent below normal is sufficient to cause apnea. On the other hand, when the alveolar carbon dioxide pressure is raised by only 2 mm. the breathing is increased about threefold. If the carbon dioxide of inspired air is increased to 4.5 per cent it is impossible to produce an apneic pause, however forcefully the artificial respiration may be carried out. There seems no reason to avoid the conclusion that every form of manually applied artificial respiration should be accompanied by the inhalation of carbon dioxide whenever possible.

PREVENTION OF TOXEMIA IN PREGNANCY

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In spite of the general acceptance of the principles and importance of antenatal care, the mortality associated with childbirth has not been materially affected over a period of many years. The majority of maternal deaths associated with pregnancy are due to a few major causes, namely, infection, toxemia and hemorrhage. Approximately three-fourths of the deaths are due to causes which are essentially controllable. The primary attack upon these factors is by means of antenatal care. It is one of these major causes, toxemia, which I wish to discuss tonight. Toxemia accounts for twenty-five to thirty per cent of all maternal deaths. This amounts to about five thousand women, as fifteen thousand women die annually during childbirth.

The control of the toxemias of pregnancy is perhaps the outstanding contribution of antenatal care. Our present knowledge of the control of the disease offers no excuse for development of serious toxemia if the patient cooperates. The mortality of toxic women should by careful handling be brought down to the figure for pregnant women in general. Frequent check of the weight, blood pressure, urine examination and observation concerning developing edema will lead to early recognition of all toxemias.

In the great majority of cases little weight is gained during the first three months of pregnancy and there may even be a loss. The greatest amount of weight is gained in the middle three months and averages about four pounds per month for this period. In the last trimester if everything is normal the gain is usually three pounds per month. A weight increase for the whole pregnancy of not more than twenty to twenty-five pounds above the normal is a very good standard. We know these patients seldom develop complicating toxemias. In the last three months of gestation an increase of body weight greater than two pounds per week suggests accumulation of extra fluid in the tissues. A considerable amount of such fluid, probably as much

as eight to ten pounds, must be retained before edema can be demonstrated clinically. Routine weighings of patients will frequently prepare the physician for edema; and with edema, frequently, the earliest sign of the toxemias, it is advisable to offer treatment even before other signs of the disease appear. A sudden gain in weight, accompanied by edema or by an increase in blood pressure, is of special significance for it foretells the advent of maternal toxemia.

Pregnant women with edema—mild, moderate or marked—unassociated with signs or symptoms of preeclamptic toxemia require as careful supervision as those obviously suffering from some grave pathologic lesion, and as stated before, the patients' weight is the best test for decrease or increase of edema. Swelling of the feet or ankles is noted at some time by practically every pregnant woman, being more marked late in the day, after exercise and during warm weather. During the last two months, some slight swelling of the feet can be expected to result from interference with the venous return of the lower extremities caused by pressure of the gravid uterus on the iliac veins. As a rule there is no pitting but the patient complains that the shoes fit too snugly and the feet appear swollen. Local edema of this nature, with normal blood pressure and no great gain in weight, is safe and can be relieved by increased activity to stimulate circulation and by elevation of the feet when the patient is at rest. Any progressive edema, however, should always be looked upon with suspicion.

It is common for pregnant women to manifest a drop in blood pressure at the beginning of pregnancy, with a gradual rise in the middle trimester to the previously normal level. Sudden rises in blood pressure, especially during the latter months, are the best forewarning of impending toxemia and for this reason the blood pressure should be taken frequently and permanent records kept throughout pregnancy. A systolic pressure of 130 and a diastolic of 80 may be taken as the upper limits of normal. A persistent elevation of systolic pressure above 140 or a diastolic pressure of 90 or more is definitely pathologic and every effort should be made toward an early reduction. It has been our experience that an increased diastolic pressure is the

more dangerous of the two and more liable to result in serious toxemia.

As you may have noticed, I have been putting particular stress on the blood pressure and weight findings, and have spoken little of urine examinations or subjective symptoms of the patient. That is exactly what I want to bring forward tonight. Too much dependence has been put on urine examinations and subjective symptoms alone. It has been our experience in the Kenton County Prenatal Clinic to come across patients who have had previous pregnancies or who have been treated by a physician during the current pregnancy and who have never had their blood pressure taken before. They look scared and want to know what we are going to do when we begin to put the cuff on their arm. It is true that there are definite symptoms of toxemia and that the urine will show changes, but we think that treatment could be instituted in many cases before these changes occur and even before any symptoms appear. In our opinion careful observation of blood pressure and weight is far more important than urine examination and clinical symptoms, and by following these signs, very early and even preventative treatment can be instituted and practically all cases of serious toxemia averted. We feel that more cases of preeclampsia or pretoxemia should be recognized and treated, thus cutting down the incidence of toxemia and with it the maternal mortality.

It has been our policy at the Prenatal Clinic to have the patients come in as early as possible and to see them regularly and often. At the first visit a complete history is obtained and a complete physical and obstetrical examination made. At each subsequent visit the patient is interviewed by the physician in charge, her weight and blood pressure taken, and a urine examination made. A gain in weight above the normal limits is regarded as abnormal and if no other abnormalities are found, the caloric intake is decreased by reducing the carbohydrates. Saccharin is substituted for sugar, bread is reduced to three slices daily and butter other than one teaspoonful per meal is eliminated. No in-between meal eating is allowed and pastries and fatty meats are prohibited. Exercise is increased so that the excessive body stores of fat will be metabolized.

Should the patient still gain weight and no toxemic factor be found responsible, she is placed upon a 1,200 caloric diet. It is necessary to hold the grossly overweight person to as small a weight gain as possible by a marked reduction in the total caloric value of the diet. It is not rare in such cases to find the markedly obese patient weighing less at term than she did at the beginning of pregnancy.

If the increase in weight is accompanied by a systolic blood pressure of 130 or diastolic pressure of 80 or if these blood pressure changes exist without the increase in weight, the patient is considered as potentially pretoxic even if she has no other signs or symptoms. This patient is sent home and to bed, sedatives given if necessary for rest, diet restricted to milk, fruit juices and alkaline drinks, and magnesium sulphate given to increase elimination by bowel. If after one week of such treatment the patient's blood pressure has not dropped below the upper limits of normal, she is sent into the hospital and treated as will be described later.

Any increase in pressure above 140 systolic or above 90 diastolic, with or without weight gain, is considered a definite danger signal, whether the patient has any other toxic symptoms or not. Such a patient is diagnosed a preeclamptic and sent immediately into the hospital. Here the patient is put at absolute bed rest, given a diet of milk, fruit juices and alkaline drinks; magnesium sulphate is given both by mouth and either intravenously or intra-muscularly, depending on the severity of the case. Glucose is given intravenously. If the patient does not respond to this conservative form of treatment, then attempts are made to empty the uterus.

I have made a study of 410 patients who have gone through the Prenatal Clinic and have been delivered at St. Elizabeth Hospital during a period of two years. These patients were all taken care of as previously outlined and were under our control through most of their gestation period.

The total cases were 410, all ages and parity.

Cases of preeclampsia, that is, those taken into the hospital for treatment numbered 24 or 6% of the total number. Of these 12 were multipara and 12 primipara, being evenly distributed through

all the age groups.

There were no cases of severe toxemia or convulsions.

There were no maternal deaths.

There were 2 stillbirths (both premature).

The average number of days in the hospital for treatment of pretoxic cases was 8.

This series of cases was worked up partly to defend our actions with the authorities of the hospital. They complained rather strenuously when we began sending in patients who apparently were not very sick, but after explaining to them what we were doing and after proving with the above report that we were actually cutting down on the total hospital treatment days per year, they were more than glad to cooperate.

The percentage of preeclampsia cases is rather high as compared with other clinics' statistics, but we feel that the total absence of severe toxemic or convulsive cases, the absence of maternal deaths, and the low foetal death rate, more than justifies it.

INTRACRANIAL COMPLICATIONS IN 250 CASES OF SURGICAL MASTOID INFECTIONS

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The clinical material for this discussion was obtained from the Otolaryngology Service of the Minnesota University Hospital over a period of approximately three years. In observing these cases on admission to the hospital I was frequently impressed by the fact that in many instances the development of an intracranial complication could have been prevented if the patient had sought and been given earlier treatment for a potentially dangerous ear infection. This could not be blamed on the lack of adequate facilities for medical and surgical treatment, inasmuch as anyone in the state could be admitted to the University Hospital as a charity patient if his finances precluded private care. The object of reviewing these cases is not to compile more statistics but to summarize briefly interesting cases, pointing out their salient features and noting what might and should have been done in the management of the fatal cases. Because

of limited time lateral sinus thrombophlebitis will not be included.

PETROSITIS

There were eight cases of petrositis, of which six recovered after surgery, and two died shortly after admission before any surgery could be done—one of meningitis and the other cerebellar abscess. The most constant symptom in these cases was severe headache, usually localized behind the eye on the involved side, much worse at night and the early hours of the morning. Sixth nerve paralysis was present in only two cases. All six operated patients showed variable changes in the petrous portion of the temporal bone on X-ray. One of the operated patients had had otorrhea for three months, and two weeks before admission began to have difficulty opening her mouth. On examination this was found to be due to extension of the infection through the inferior surface of the pyramid into the pharyngeal vault. This receded without incision after adequate mastoid surgery. Another patient had had a mastoidectomy done elsewhere fifteen months previously. The ear had continued to drain and intermittent headaches had been present during the four weeks before admission. It was found at operation that in the original mastoid operation apparently only a small opening had been made into the antrum. Very extensive remaining cell structure was removed and a cell lead into the petrosa was found along the posterior superior angle of the pyramid. In all six of these cases an entrance into the petrous pyramid was accomplished by following tracts of cells either above, behind, or below the labyrinth without having to do a radical mastoidectomy. In cases where the fistulous tract is anterior to the labyrinth a radical mastoidectomy must be performed in order to provide adequate exposure.

Of the two cases of petrous involvement that were not operated on, the first one died of meningitis shortly after admission. He had had a R. suppurative otitis media for three months and developed meningitis three days before admission. At post-mortem examination an area of coalescence of the temporal bone below and medial to the internal auditory meatus was found with erosion into the dura at this point. Had this patient sought medical attention and been operated on early instead of neglecting a suppurating ear three months, this area

of infection could easily have been found and drained through the infra-labyrinthine group of cells.

The other fatal case gave a history of having had a chronic otitis media for which a radical mastoidectomy had been done elsewhere a few years previously. However, his ear had continued to drain foul pus. About a week before admission he began to have vertigo and headache. On admission he was somewhat confused and had definite findings of a cerebellar abscess, i. e., tendency to fall backward, irrespective of the position of his head, and past-pointing with the hand on the side of the lesion and no past-pointing with the other hand. If the lesion had been in the labyrinth he would have had past-pointing with both hands and change in the position of the head would have changed the direction of his falling. The fundus examination showed only a minimal blurring of the disc margins. The patient died from an unexpected respiratory and circulatory collapse shortly after admission. A spinal puncture had not been done. Autopsy showed a cerebellar abscess secondary to an area of necrosis of the temporal bone in the region of the internal auditory meatus. The immediate cause of death was pressure on the medulla. In this patient the continuance of foul purulent drainage for two years after radical mastoidectomy indicated incomplete exenteration of all the diseased tissue, which in this instance extended behind the labyrinth into the petrous pyramid. The post-labyrinthine route would have afforded an easy approach to this area.

LABYRINTHITIS

Two patients had suppurative labyrinthitis on admission. The first one had had a R. suppurative otitis media of five weeks' duration and four days before admission developed vertigo, vomiting and inability to stand up. The spinal fluid was negative. A simple mastoidectomy was done and the patient gradually improved and at no time showed signs of meningeal irritation. The labyrinth was not opened. The second patient gave a history of R. otorrhea of seven months duration, headache for two weeks, and vertigo of four or five days. Neurological examination revealed nystagmus away from the lesion, past-pointing and falling toward the lesion. The spinal fluid showed sixty-four cells, mostly mono-

cytes. A radical mastoidectomy was done but the labyrinth was not opened, and the patient improved rapidly. Subsequent spinal fluid examinations were negative.

It is generally agreed that unless there are findings of impending meningitis suggested either by general symptoms or spinal fluid changes, careful observation of the patient after adequate mastoid surgery is justifiable and labyrinthectomy is indicated only when there is apparent danger of the infection invading the meninges.

One other patient developed purulent labyrinthitis and meningitis one week after a simple mastoidectomy. A labyrinthectomy was immediately done, but the meningitis was fatal. This patient's general course suggested a virulent infection to which there was poor resistance.

MENINGITIS

One patient was admitted as a possible meningococcic meningitis. The cell count of the spinal fluid was two thousand. There was no organism found on smear or culture. A careful history and physical examination revealed that the patient had had a middle ear infection with very little drainage of three weeks' duration. A mastoidectomy with wide exposure of middle fossa dura was done, showing the dura to be moderately injected. Several spinal punctures were done post-operatively. The spinal fluid cell count was only four on the fifth day, and the patient rapidly recovered.

BRAIN ABSCESS

There were six cases in this group, of whom two recovered and four died. The abscess was in the cerebellum in two cases, and in the temporal lobe in four.

The first case of cerebellar abscess was secondary to a chronic otitis media of ten years' duration. A week before admission the patient had an exacerbation of the otitis. This was followed by headache and dizziness at times. The only positive neurological finding on admission was an indefinite tendency to past-point to the side of the involved ear. Shortly after admission he had a chill. At operation a large peri-sinus abscess was found. The sinus was apparently not thrombosed. The patient continued to have a septic temperature and a jugular ligation was done. The sinus was still not thrombosed. The patient died a few

days later and autopsy showed a sinus phlebitis, a small cerebellar abscess medial to the sinus, multiple lung abscesses and bilateral pleural effusion.

The other case of cerebellar abscess has already been discussed under petrositis. In both of these cases neglect of a chronic otitis media resulted in the development of an intracranial complication.

Of the four cases of temporal lobe abscess the first one had had a suppurative otitis media for fifteen weeks before he consented to mastoidectomy. Two weeks after the operation he suddenly developed headache, nausea and vomiting. On admission this time he presented a well-advanced meningitis. At autopsy an encapsulated abscess of the R. temporal lobe was found. It had probably been present for several weeks and never did present any localizing symptoms or findings.

The second case of temporal lobe abscess was secondary to a chronic R. otitis media of eight years duration. A few weeks before admission the patient had an exacerbation of the otitis, followed by intermittent headache on the same side. A few days before admission he fainted, vomited and became rather drowsy. On admission he was conscious, but somewhat stuporous at times. There was no aphasia. Visual fields were roughly normal. Superficial reflexes were absent on the opposite side. Coordination was normal. Optic discs were normal. A radical mastoidectomy was done, but no lead through the dura was found. It was decided to give the abscess a little more time to wall off and use a temporal approach later. However, the patient died the next day from what was thought to be a basilar meningitis. Autopsy revealed the cause of death to be a herniation of the brain stem into the foramen magnum. An encapsulated abscess was found in the posterior portion of the temporal lobe. In retrospect it seems that a decompression, ventricular or cisternal puncture might have tided the patient over until the abscess was felt to be sufficiently walled off for surgery.

In the third case a L. mastoidectomy was done on the eighth day of an otitis complicating scarlet fever. On removing the cells in the zygomatic region of the mastoid, a softened area was found in the dura from which was draining pus from a superficial temporal lobe abscess. A rubber tube was inserted for drain-

age. The patient progressed nicely until the seventh post-operative day, when he had a generalized convulsion. A spinal puncture revealed a cell count of 2,000 with 65% polys and gram positive cocci on direct smear. The mastoid was reopened and some retention was found in the abscess cavity. This was drained and the bone over the surrounding dura was removed over an area of two by three inches. Drainage ceased and the wound healed in several weeks. A few months later the patient returned with a typical left temporal lobe lesion, i. e., aphasia, headache, projectile vomiting, blurred vision and papilledema. Reexploration of the temporal lobe showed the old abscess cavity filled with fluid. A Mosher brain drain was inserted and the abscess cavity probably became obliterated this time as he was still well a year later.

The fourth patient developed a L. otitis media and an aphasia shortly after the onset of scarlet fever. A few days later he was admitted to the hospital and had a few Jacksonian convulsions, which started in the R. arm. There was early papilledema. The spinal fluid showed 64 cells, half polys and half monocytes. It was suspected that he had a beginning abscess in the left temporal lobe and a mastoid exploration was deemed advisable. There was a small amount of pus in the middle ear and antrum, but the rest of the mastoid appeared to be normal. The middle fossa dura was uncovered above the antrum over an area of about six by seven centimeters, and was found to be slightly injected. In view of the acuteness of the lesion the temporal lobe was not needled. There was a profuse amount of serous drainage from the wound post-operatively and the patient had no more convulsions and recovered. The lesion in this patient was either a localized area of meningitis or encephalitis, or possibly an abortive or pseudo-abscess. From the standpoint of treatment the spinal puncture and decompression of the L. temporal lobe area apparently were of definite value.

COMMENT AND CONCLUSIONS

Inasmuch as these cases were all seen before the era of sulfanilamide and its derivatives, the management of these patients would at present be somewhat different, and more conservative surgical procedures could perhaps be applied in some of the acute infections. Chemo-

therapy will materially lower the mortality in those cases in which the high virulence of the causative organism and the low resistance of the patient are predominating factors. However, as pointed out in several of the cases under consideration, delay in the adequate surgical treatment of long-standing suppurative otitis media is still responsible for a large number of intracranial complications. While this point is only too well known to otologists, some physicians and most lay people still regard a painless draining ear as a condition of no consequence.

In addition to complete exenteration of all accessible mastoid cell structure, wide uncovering or decompression of the dura over a suspected intradural lesion serves a two-fold purpose. First, it rules out the presence of any extra-dural pathology or may disclose a lead of infection through the dura. Secondly, it allows room for swelling incidental to inflammation of the brain tissue, whether it be a localized meningitis or encephalitis, an abortive brain abscess, or a definite brain abscess. In the latter instance the decompression may enable the patient to survive until it is felt that the abscess is sufficiently walled off to permit surgical drainage through a clean area later. In some instances where relief of increased intracranial pressure is urgent, ventricular puncture should be considered. However, its use is attended by some danger in the presence of an abscess because of the possibility of the abscess rupturing as a result of the release of high intracranial pressure.

While the review of these cases brings out very little that is new, it does re-emphasize several points, the consideration of which should lower the mortality from intracranial complications in the future. It is not unreasonable to speculate that in five of the six fatal cases intracranial complications would not have developed if the patients had been given earlier adequate surgical treatment.

BOOK REVIEWS

THE DOCTOR'S 1940 DAILY LOG—Publishers of Dr. Colwell's "Daily Log for Physicians" were kind enough to send us a copy which describes itself as a "brief, simple, accurate financial record for the physician's desk."

When we were engaged in the private practice of medicine, record keeping was largely a

matter of conscience. Outside of the day book and the ledger, we were pretty individualistic in all that we did, but now, the intricacies which have come along with the development of our modern social order, make necessary the keeping of an interminable and complicated set of records.

We need to have an obstetrical record, a record of notifiable diseases, a record of expenses so that we can know what can and cannot be deducted from income tax reports, as well as the simple record of services rendered each patient at each visit or call. Convenient arrangements for the keeping of these records have been needed for many years, and this record book not only has that but also adequate arrangements for the keeping of personal accounts, appointments, surgical record, social security tax record, utility record—all of this is found in this one neat, compact volume. This same book also provides space for keeping accounts that are paid on the installment plan. We will say very frankly that the thing that impressed us most is how simple it makes what has always been a laborious part of a physician's work. This valuable record book may be secured from the Colwell Publishing Company, Champaign, Illinois, at a cost of \$6.00, and there is one for each particular type of practice.

FUNCTIONAL DISORDERS OF THE FOOT, THEIR DIAGNOSIS AND TREATMENT—By Frank D. Dickson, M. D., F. A. C. S., Orthopedic Surgeon, St. Luke's Kansas City General and Wheatley Hospitals, Providence Hospital, Kansas City, Missouri and Rex L. Diveley, A. B., M. D., F. A. C. S., Orthopedic Surgeon, St. Luke's, Kansas City General and Research, Wheatley, Providence Hospital, Kansas City. 202 illustrations. J. B. Lippincott Company, Publishers, Philadelphia. Price \$5.00.

Two practical orthopedic surgeons have written this book. They realize that there is a long felt need for a brief concise discussion of foot disorders and this book has been written to meet that need.

Functional Disorders of the Foot is a complete book . . . one that covers every phase of the subject, thoroughly and conclusively. The discussion of any disorder plainly points the way to diagnosis and treatment and will certainly aid the majority of those concerned in the correction of disorders of the feet in suggesting such measures as will prove useful in correcting or relieving symptoms. While much of the book is elementary, it is of an intensely practical nature and will prove to be of inestimable value to every man who keeps it in his library as a ready reference.

Kentucky Medical Journal

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1940

EDITORIALS

THE PLATFORM OF THE AMERICAN MEDICAL ASSOCIATION*

1. The establishment of an agency of federal government under which shall be coordinated and administered all medical and health functions of the federal government exclusive of those of the Army and Navy.

Today the medical and health functions of the United States are divided among a multiplicity of departments, bureaus, and federal agencies. Thus, the United States Public Health Service is in the Federal Security department; the Maternal and Child Welfare Bureaus in the Department of Labor; the Food and Drugs administration in the Department of Agriculture; the Veterans' Administration are separate bureaus of the government. The WPA, CCC, and PWA are concerned with a similarity of efforts in the field of preventive medicine. The Federal Works Administration and the Federal Housing Administration also have some medical functions.

Since 1875, the American Medical Association has urged the establishment of a single agency in the federal government under which all such functions could be correlated in the interest of efficiency, the avoidance of duplication, and a saving of vast sums of money. Such a federal health agency, with a secretary in the cabinet, or a commission of five or seven members, including competent physicians would be able to administer the medical and health affairs of the government with far more efficiency than is now done.

2. The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health and the care of the sick on proof of such need.

The physicians of the United States have given freely of their time and of their funds for the care of the sick. Their contributions to free medical service amount to at least \$1,000,000 a day. The physicians of this country have urged that every person needing medical care be provided with such care. They have urged also the allotment of funds for campaigns against maternal mortality, venereal disease, and for the investigation and control of cancer. The medical profession does not oppose appropriations by Con-

*Adopted by the Board of Trustees of the American Medical Association at Chicago, November 16, 1939.

gress of funds for medical purposes. It feels, however, that in many instances states have sought aid and appropriations for such functions, without any actual need on the part of the state, in order to secure such federal funds as might be available. It has also been impossible, under present technics, to meet actual needs which might exist in certain states with low per capita incomes, with needs far beyond those of wealthier states, in which vast sums are spent.

It is proposed here simply that Congress make available such funds as can be made available for health purposes; that these funds be administered by the federal health agency, mentioned in the first plank of this platform, and that the funds be allotted on proof of actual need to the federal health agency, when that need be for the prevention of disease, for the promotion of health, or for the care of the sick.

3. **The principle that the care of the public health and the provision of medical service to the sick is primarily a local responsibility.**

Obviously if federal funds are made available to the individual states for the purposes mentioned in the second plank of this platform, there might well be a lessened tendency in many communities to devote the community's funds for the purpose, and, in effect, to demand that the federal government take over the problem of the care of the sick. Hence, it is suggested that communities do their utmost to meet such needs with funds locally available before bringing their need to the federal health agency, and that the federal health agency determine whether or not the community has done its utmost to meet such need before allotting federal funds for the purpose.

4. **The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.**

The medical profession is not static. It wishes to extend preventive medical service to all of the people within the funds available for such a purpose. Obviously, this will require not only a federal health agency which may make suggestions and initiate plans, but also a mechanism in each community for the actual expansion of preventive medical service and for the proper expenditure of

funds developed both locally and federally. In the development of new legislation such mechanism may be suitably outlined.

5. **The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.**

The medical profession does not yield to any other group in this country in its desire to extend medical care to all of those unable to provide themselves with medical service. The American Medical Association through its House of Delegates has already recognized the possible existence of a small group of persons able to provide themselves with the necessities of life commonly recognized as standard in their own communities, but not capable of meeting a medical emergency. It is recognized, however, that only persons of the same community fully familiar with the circumstances can determine the number of people who come properly under such classification and that only persons in actual contact with such instances are capable of administering suitably and efficiently the medical care that may be required. Hence it is the platform of the American Medical Association that medical care be provided for the indigent and the medically indigent in every community but that local funds to be first utilized and that local agencies determine the nature of the need and control the expenditure of such funds as may be developed either in the community or by the federal government.

5. **In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established.**

In the so-called National Health Program it is asserted that one-half the counties of the United States are without suitable hospitals, and vast sums are requested for the building of new hospitals. In contrast, reputable agencies within the medical profession assert that there are only 13 counties more than 30 miles removed from a suitable hospital and that in 8 of those 13 counties there are five people per square mile. In the United States today the percentage of hospital beds per 1,000 of population is higher than that of any other country in the world. This fact is completely ignored by those who would indulge in a program for the building of great numbers of new hospitals.

Moreover, it seems to be taken for granted that hospital building has languished in recent years, whereas considerable numbers of hospitals have been built with federal funds by various state agencies and also by the PWA, the WPA and by the Federal Works Administration.

Analyses may indicate that in many instances such hospitals were built without adequate study as to the need which existed or as to the possible efficient functioning once it was erected. Moreover, there is evidence that in recent years many of the hospitals of the United States known as nonprofit voluntary hospitals have had a considerable lack of occupancy due no doubt to the financial situation in considerable part. It seems logical to suggest then that such federal funds as may be available be utilized in providing the needy sick with hospitalization in these well established existing institutions before any attempt is made to indulge in a vast building program with new hospitals. In this point of view the American College of Surgeons, the American Hospital Association, the Catholic Hospital Association, the Protestant Hospital Association and practically every other interested voluntary body agree.

Again it has been argued that the demands for medical care in some sections of the country might require the importation of considerable numbers of physicians or the transportation of numbers of physicians in the areas in which they now are to other areas. In this connection it would seem to be obvious that a change in the economic status of the communities concerned would result promptly in the presence of physicians who might be seeking locations. The utilization of existing qualified facilities would be far more economical than any attempt to develop new facilities.

7. **The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability.**

In the United States today our sickness and death rates are lower than those of any great country in the world. This fact was recognized by the President of the United States when he sent the National Health Program to the Congress for

careful study. The President emphasized that a low death rate may not mean much to a man who happens to be dying at the time of tuberculosis. The medical profession recognizes the importance of doing everything possible to prevent every unnecessary death. At the same time it has not been established by any available evidence that a change in the system of medical practice which would substitute salaried government doctors for the private practitioner or which would make the private practitioner subject to the control of public officials would in any way lower sickness and death rates.

There exists, of course, the fact that some persons are unable to obtain medical service in the circumstances in which they live and that others, surrounded by good facilities, do not have the funds available to secure such services. Obviously here again, there is the question of economics as the basis of the difficulty and perhaps lack of organization in distribution of medical service and a failure to utilize new methods for the distribution of costs which might improve the situation.

The medical profession has approved prepayment plans to cover the costs of hospitalization and also prepayment plans on a cash-indemnity basis for meeting the costs of medical care. It continues, however, to feel that the development of the private practice of medicine which has taken place in this country has led to higher standards of medical practice and of medical service than are elsewhere available and that the maintenance of the quality of the service is fundamental in any health program.

8. **Expansion of public health and medical services consistent with the American system of democracy.**

Careful study of the history of the development of medical care in various nations of the world leads to the inevitable conclusion that the introduction of methods such as compulsory sickness insurance, state medicine and similar technics results in a trend toward communism or totalitarianism and away from democracy as the established form of government. The intensification of dependence of the individual on the state for the provision of the necessities of life tends to make the individual more and more the creature of the state rather than to make the state the servant of the citizen. Great leaders

of American thought have repeatedly emphasized the fact that liberty is too great a price to pay for security. George Washington said, "He who seeks security through surrender of liberty loses both." Benjamin Franklin said, "They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety."

In these times when the maintenance of the American democracy seems to be the most important objective for all the people of this country, the people may well consider whether some of the plans and programs that have been offered for changing the nature of medical service are not in effect the first step toward an abandonment of the self-reliance, free will and personal responsibility that must be the basis of a democratic system of government.

THIRTY-FIVE YEARS AFTER

In 1904 a small group of persons, who were not inclined to run away from a hard job, determined to do something about tuberculosis, even though there was no known cure or preventive vaccine for the disease. Only a few health departments were doing anything at all to combat tuberculosis. It was pretty generally accepted that if you had "consumption" you died, and that was all there was to it.

But this little group glimpsed in the distant future the goal that has brought them along the road of sound progress ever since. With eyes and hearts set on the objectives of the dim years ahead, they overcame the inertia of centuries and organized the National Tuberculosis Association.

Soon state and local associations were organized throughout the nation, and the fight against tuberculosis was launched over a wide front.

In thirty-five years these associations have gone far along the road that was barely discernible at the beginning. Today there are 200,000 persons alive in the United States who last year would have died of tuberculosis if that year had been 1904. In 1904, 201 out of every 100,000 persons died of tuberculosis, while in 1938, 49 out of each 100,000 died.

The Kentucky Tuberculosis Association was organized soon after the National and immediately tackled the tuberculosis problem in Kentucky. Kentucky's death

rate due to tuberculosis was 227 per hundred thousand in 1911. That year 5,293 were taken by this disease. Soon the entire state became aroused. Physicians, educators, politicians, civic groups and the public at large became intensely interested and the fight was carried to every community. Now the tuberculosis death rate of Kentucky has fallen to 71 per hundred thousand in 1938. This tremendous decline in the tuberculosis death rate has lead many to conclude that the fight against tuberculosis has been won. This is far from the truth, because tuberculosis is still the leading cause of death in the active period of life. We must continue our fight if we hold the ground that has been gained in this great struggle.

You are now urged to buy Christmas Seals to help finance the work of the National Tuberculosis Association, the State and local associations in all parts of the country. Organized tuberculosis work considers itself as standing on the threshold at thirty-five and getting fresh inspiration from the future, as well as pardonable satisfaction from the past.

KENTUCKY DOCTORS IN THE ARMY

In 1917 when the United States entered the World War, the Kentucky State Medical Association listed all doctors and established the order in which they could be spared from the community. At that time there was a definite major emergency.

We are now in what has been called a "limited emergency" in that both the military and naval services have been increased beyond the capacity of their present doctor strength and their reserves are being called into active service for extensive periods.

The Army has out two calls for doctors to serve for one year. One is for those qualified in Aviation Medicine. A qualifying correspondence course must be completed before these appointments can be made. It takes about six months to finish this course, and the doctors who have taken it say it is more than worth while for their regular practice.

The second call is for regular practice with the Regular Army and does not require any special qualifications beyond those for ordinary ethical practice in this state. Candidates must be members of the Medical Reserve Corps, under 35

years of age and able to pass the physical examination.

Since this is a limited emergency no concerted effort of the Association will be made as in 1917, but it is definitely recommended that all those who are eligible seriously consider this opportunity to serve the country.

From the purely selfish standpoint two things appear. As one veteran of the World War who is practicing most successfully and is a member of the Reserve Corps has written, "It will give young medical and dental men advanced experience in their own line of work which otherwise would take many years to obtain." As to the future we can only make deductions. The Army is short of doctors and dentists now, and is expecting another increase to be authorized by the next session of Congress. Hence a permanent shortage appears which will undoubtedly be filled by selection from those men who have answered this call for one year of active duty.

Full information can be obtained by addressing "Kentucky Military Area, 436 Post Office Building, Louisville."

—n—

INTRAPLEURAL PNEUMOLYSIS

In the September, 1939, issue of the Diseases of the Chest (Vol. V, No. 9), Paul A. Turner, Director of Hazelwood Sanitarium, discussed Intrapleural Pneumolysis. On 59 patients, of whom 49 had disease in the contralateral lung 40% of them showing cavities, he obtained excellent results, having closed the cavities in 87% of his cases. Fourteen of his patients received bilateral pneumothorax. Turner feels by this method he has been able to convert an undetermined number of non-effective pneumothoraces into an effective collapse and has saved a number of patients from a possible thoracoplasty.

Empyema occurred in 24.5% of his cases, five of whom developed bronchopleural fistula. He admits this percentage of complications is high, but since he was dealing with desperately ill patients, with a very poor prognosis, the remarkable results he has obtained is commendable.

Science has no nationality because knowledge is the patrimony of humanity, the torch which gives light to the world.

COUNTY SOCIETY REPORTS

Calloway: The regular dinner meeting of the Calloway County Medical Society was held at the National Hotel on November 9, 1939 at 7:00 p. m. with the President, Dr. Rob Mason, presiding. The society had as its guests the Calloway County Auxiliary to the Calloway County Medical Society. The following physicians and their wives were present:

Dr. and Mrs. Bob Mason, Dr. and Mrs. Hal Houston, Dr. and Mrs. C. H. Jones, Drs. Will and Ora K. Mason, Dr. and Mrs. E. W. Garrett, Dr. and Mrs. L. D. Hale, Dr. and Mrs. A. D. Butterworth, Dr. and Mrs. Hugh Houston, Dr. and Mrs. J. A. Outland and Mrs. Russell.

The members absent were as follows: P. A. Hart, J. V. Starks, E. D. Miller, Edison Fisher and Katherine Fisher.

The program consisted of the following papers:

"Ovarian Cyst" and report of two cases, by Dr. L. D. Hale.

Appendicitis and Its Complications, by Dr. Will Mason.

The medical society discussed freely the papers rendered by the above essayists.

The president reminded the committee, composed of Dr. L. D. Hale, Dr. Hal Houston and Dr. Will Mason that they had not reported on the question of "Fair Charges for Calls and Professional Services in Calloway County."

The Society agrees that they would limit its dinner meetings to once every three months. This making the next meeting on the second Thursday in February.

The meeting was dismissed by the president after a most enjoyable evening.

HUGH L. HOUSTON, Secretary.

Jefferson: November 7. Refresher Course in Hematology. The Pathogenesis of Anemia. "Indications for, and Limitations of, Sternal Biopsies." University of Louisville, Department of Pathology, Harold Gordon.

"Removal of a Ureteral Calculi per Vaginal Route, Complicated by Pyelonephrosis." (Moving Pictures) Mischa Casper.

"Appendicitis, with Special Reference to Mortality." J. Allen Kirk.

November 20: — Guest Speaker, Vilray P. Blair, St. Louis, Mo.

Address: "Treatment of Cancer of the Face." (Lantern Slides.)

W. B. TROUTMAN, Secretary.

Rockcastle: The Rockcastle County Medical Society has held regular meetings and the following programs have been presented:

Differential Diagnosis of Coma, R. H. Lewis, Wildee. August 4, 1939.

Epilepsy, W. E. McWilliams, Brodhead, September 1, 1939. Discussion followed by all members present.

Difficult Labor, N. M. Garrett, Brodhead, October 6, 1939. Discussion by all members present. This was an excellent paper and was enjoyed by all and was of extreme interest to the general practitioner who is also burdened with obstetrical cases.

Appendicitis, John C. Baker, Berea, November 3, 1939. This was an interesting paper and was discussed by all members present. At the meeting, which was called to order at 6:45 p. m., in the parlor of the Dixie Boone Hotel, Mt. Vernon, following dinner, there were present the following physicians:

Walker Owens, Mount Vernon; N. M. Garrett, Brodhead; W. E. McWilliams, Brodhead. Jim Pennington, Mt. Vernon; Lee Chestnut, Mt. Vernon; R. H. Lewis, Wildee; T. A. Griffith, Mt. Vernon. At the past meeting, it was voted that we invite a doctor from out of the county to present a paper. The physician elected was J. C. Baker, Berea, who presented a paper on Appendicitis, as listed above. Besides this guest speaker, we had the following welcome visitors: H. I. Frishie, Stanford; M. M. Phillips, Crab Orchard; D. B. Southards, Stanford; J. D. Henderson, Mt. Vernon. It is the intention of this Society to have this Tri-County meeting at least every six months. This was the largest attended and best meeting which has ever occurred in the medical history of Rockcastle County. The discussions were ample and the case reports were interesting. Of particular interest was the report of three brothers with a peculiar type of muscular atrophy which were reported by Owens and Griffith, Mt. Vernon. A discussion of the Kentucky PreMarital Law caused considerable comment and headaches. The consensus of opinion was to do the best that we can and to cooperate in making this law a success. Although all physicians present were not in complete accord with this law, it is believed that it will serve its purpose.

Due to the fact that we have had several cases of typhoid fever and diphtheria in the county, the Rockcastle County Health Department has been carrying out extensive immunization.

Drs. McWilliams and Griffith attended the Kentucky State Medical meeting at Bowling Green. Dr. McWilliams attended the Psychiatric Meeting in Louisville. Drs. Garrett and Griffith attended the meeting of the Sixth and Seventh Councilor Districts at Somerset. This

was an extremely interesting meeting.

The visitors extended an invitation to attend their next County Society meeting in Stanford. The invitation was appreciated. At the next meeting in December, the paper will be presented by T. A. Griffith, "A Brief Discussion on the Diagnosis and Treatment of Common Enlargement of the Neck." The President asked for a motion to adjourn which was made and seconded. Adjournment at 8:40 p. m.

T. A. GRIFFITH, Vice-President,
LEE CHESNUT, Secretary.

Jefferson: In Memoriam for H. J. Phillips, 1872-1939.

WHEREAS—Dr. Harry Phillips, companion, friend and medical advisor to many, and an ardent member of the Jefferson County Medical Society, has been retired by God to his immortal home; and—

WHEREAS—This Society grieves over the loss of this member, and sympathizes with the bereaved family, friends and patients, therefore be it—

RESOLVED—That a copy of these resolutions be spread upon the minutes of this Society and that a copy be sent to the family and to the press.

Oh! blithesome smile and happy presence dear
That shed effulgent hope where'er that smile
Illumed the sick, or for a little while
Did cheer the melancholy from some fear.

Ben Adam's tribe was his; he shed a tear
For fellowman, nor sought by any wile
Ought but to happiness each one beguile,
And by his acts nobility made clear.

Oh! beauteous spirit of immortal dead
That shining still illumes the sodden way
Of faltering steps bedewed with moist care:
Sweet messenger, thy trailing 'light doth shed
A hope that still in earthly beings may
Reflected be, and give back spirit rare.

J. J. WYNN,
HENRY RUBEL,
R. ALEXANDER BATE, Sr.,
Chairman

Jefferson: In Memoriam for C. H. Harris, 1870-1939.

WHEREAS—The breath of Life, the gift of God to earthly beings, returneth unto that source from whence it springs; and

WHEREAS—Doctor Clarence H. Harris, a life long and active member of this Society; a World War Health Officer of distinguished

service; a prominent and civic minded physician surrounded by fond patients and a devoted wife and family, was overtaken by death July 8th, 1939; and

WHEREAS—This Society desires to express its sympathy to the bereaved family, relations and friends and record its own loss; therefore be it

RESOLVED—That these resolutions be drawn up and that a copy be presented to the devoted wife, a copy be sent for publication and a copy be spread upon the minutes of this Society.

Where e'er the name of Father sweetly sounds
There love and happiness and hope abounds:
So though the carnal must in spirit form
Arise, still hearts that linger pine, while warm.

J. J. WYNN,
HENRY RUBEL,
R. ALEXANDER BATE, Sr..

NEWS ITEMS

Dr. Austin Funk, 65, Jeffersonville physician and civic leader and president of the Jefferson County, Kentucky, Eye, Nose and Throat Specialists' Society, died from a fractured skull suffered when he lost control of his automobile and was knocked to the street by the impact when the machine hit a tree near his home. The car, recently purchased, was the first owned by Dr. Funk.

Dr. E. C. Romele, Frankfort, who for many years was health officer of Franklin County, and one of the best loved and respected among the physicians, died suddenly of heart disease, October 14, 1939.

Dr. Harry J. Phillips, 67, practicing physician in Louisville for forty-six years, died at 6 p. m. Tuesday, October 10, at the Kentucky Baptist Hospital, after a two months illness. A native of Jeffersonville, Indiana, Dr. Phillips attended public schools here and was graduated from the University of Louisville in 1893.

Dr. L. R. Henry, of North Middletown, died Monday, October 9th. He was a retired Bourbon County physician, farmer and saddle horse breeder. He served as Mayor of North Middletown twenty-four years and practiced medicine there twenty-nine years. Prior to that he lived in Richmond.

Dr. Bernard Asman (Proctology) and Dr. Henry B. Asman (General Surgery) have moved their offices to suite 309-310 Brown Building, Louisville.

BOOK REVIEWS

DISEASES OF THE SKIN—By Richard L. SUTTON, M. D., Sc. D., LL. D., F. R. S. (Edin.) Professor of Dermatology, University of Kansas School of Medicine and Richard L. Sutton, Jr., A. M., M. D., L. R. C. P. (Edin.) Associate in Dermatology, University of Kansas, School of Medicine. With 1452 text illustrations and 21 color plates. Tenth Edition, revised, enlarged and reset. Price \$15. C. V. Mosby Co., Publishers, St. Louis, Missouri.

In the new Tenth Edition of this popular text there are Thirty Thousand (30,000) references in the bibliography. There are 1549 pages with 1452 illustrations (21 in colors). Entirely rewritten and reset this edition is really a new book—an Atlas on Dermatology. It presents Diseases of the Skin from a new viewpoint, namely: That skin symptoms are manifestations of internal diseases. This fascinating approach at once arouses interest on a wide front in medical practice. Every general practitioner and medical student is challenged by it. This new edition has taken a commanding lead in adoptions in medical schools and in sales to practicing physicians. It is the book of the hour in dermatology.

Sound and effective treatment is featured throughout the Tenth Edition. While a chapter of 48 pages is devoted to "Treatment," this section merely outlines internal and external methods of treatment. Elsewhere in the book as each skin condition is discussed, its symptoms, etiology, pathology, diagnosis, prognosis, and treatment is given—the treatment recommended being well detailed and carefully outlined. The clinical descriptions are complete, and the matter of differential diagnosis is given the attention it deserves. Sound and proven methods of treatment are suggested. The prescriptions recommended are those that have stood the test of time.

HEADACHE AND HEAD PAIN, A READY REFERENCE MANUAL FOR PHYSICIAN—By Walton F. Dutton, M. D., Formerly Medical Director, Polyclinic and Medico-Chirurgical Hospital, Graduate School of Medicine, University of Pennsylvania, Visiting Physician to Northwest Texas Hospital, Director Medical Research Laboratories, Amarillo, Texas. F. A. Davis Company, Publishers, Philadelphia. Pa. Price \$4.50.

In his preface Dr. Dutton says: "Headache and head pains are essentially symptoms of many disease processes or functional disturbances. Probably no sources of pain compare in frequency to these symptoms in the large majority of patients who seek medical aid.

"A headache is 'just a headache' to most peo-

ple and millions of dollars are spent yearly for so-called headache cures. Many of these give temporary relief, but such relief is misleading, unwarranted and dangerous. Hence the plea for monograph that will familiarize the physician with conditions that will prevent self-diagnosis and undue medication.

"Headaches" have always been an absorbingly interesting subject to Dr. Dutton. He has made an exhaustive study of every factor in the origin of headaches. He has been unusually successful in his treatment of them. And now, he sends you his vital findings in a book which answers the call of thousands of physicians!

Dr. Dutton's aim is to help you to ascertain and eliminate the causes of headache, to point out the steps that will lead to a true diagnosis and then to guide you in treatments that will bring lasting freedom from headache.

AN INTRODUCTION TO SOCIOLOGY AND SOCIAL PROBLEMS, by Deborah MacLurg Jensen, R. N., B.Sc., Social Service Consultant to the Visiting Nurse Association, St. Louis, and Lecturer in Nursing Education, Washington University. The C. V. Mosby Company, Publishers. 1939. Price, \$2.75.

"This book is intended primarily as a text for the student nurse during the two courses, Sociology and Social Problems. It may be used also as a reference book during the student's clinical experiences, especially when she makes special case and family studies. Graduate nurses who did not take these subjects as students may find it helpful as they continue their clinical studies after graduation."

FAILURE OF THE CIRCULATION — By Tinsley Randolph Harrison, M. D., Associate Professor of Medicine, Vanderbilt University School of Medicine. 509 pages with additional charts and illustrations. The Williams and Wilkins Company, Publishers, Baltimore. Price \$4.50.

Dr. Harrison's book on heart disease gives an analysis of the several major syndromes and the functional basis of each. It answers the "why" of heart diseases in that it puts to physiologic and experimental proof many of the prevailing concepts concerning the nature of heart failure.

The book contains at the same time a great deal of practical advice concerning the diagnosis and treatment of heart disease, for the author shows that regardless of etiology each of these syndromes of disordered functions has certain definite prognostic and therapeutic implications.

In the second edition comprehensive discussions of "cardiac syncope" and of "cardiac collapse" have been added, and as the most im-

portant change the section dealing with angina pectoris has been greatly expanded. It applies to clinical problems the numerous recent advances made in the study of the control of the coronary circulation.

CARDIO-VASCULAR DISEASES, THEIR DIAGNOSIS AND TREATMENT — By David Scherf, M. D. and Linn J. Boyd, M. D., F. A. C. P. Associate Professor of Clinical Medicine and Professor of Medicine respectively, The New York Medical College. C. V. Mosby Company, Publishers, St. Louis. Price \$6.25.

Working in close collaboration, two distinguished heart specialists have produced this most comprehensive yet concise survey of up-to-date knowledge in the problems of cardiovascular diseases.

Their work is based on an exceptionally wide experience, both in Europe and in America, and on an intimate knowledge of all the facts relevant to cardiologic diagnosis and treatment.

The book itself is the outcome of teaching and lecturing to both students and post-graduate workers, with the result that it stresses the aspects which are of particular importance in general practice, and gives practical information for direct use without recourse to complicated methods and apparatus.

Though theoretical considerations are reduced to a minimum, and the discussion of graphic methods is omitted in this book, important observations on many of the finer points are included, and for this reason, expert cardiologists will find it stimulating.

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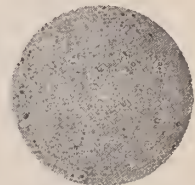
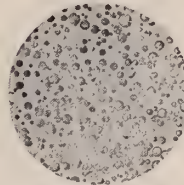
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SUPPLEMENT TO

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BOWLING GREEN, KY.

FEBRUARY, 1939

THE
JOSEPH NATHANIEL McCORMACK
MEMORIAL

THE KENTUCKY
OF MEDICINE

FEB 17 1939

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**Exercises In Connection With the Dedication, As A Memorial To
Joseph Nathaniel McCormack, of the New Home of the Kentucky
State Medical Association and the State Board of Health of
Kentucky at 620 South Third Street, Louisville**

TUESDAY EVENING, OCTOBER 4, 1938

The Eighty-Eighth Annual Session of the Kentucky State Medical Association was made the occasion for dedicating, as a memorial to Dr. Joseph Nathaniel McCormack, the new home of the Association and of the State Board of Health of Kentucky, at 620 South Third Street, Louisville. The speakers were Dr. C. C. Howard, Glasgow, who spoke for the Kentucky State Medical Association; Hon. Albert B. Chandler, Governor, who represented the Commonwealth of Kentucky, and Dr. Arthur T. McCormack, State Health Commissioner, who appeared for the State Board of Health.

At the conclusion of Governor Chandler's address, Miss Mary Tyler McCormack, granddaughter of Dr. Joseph Nathaniel McCormack, unveiled the portrait and bronze plaque to her grandfather, which had been placed in the entrance hall of the building. During the unveiling, Mrs. Nellie M. Meyer played harp selections, including "My Old Kentucky Home," while an overflow audience, which filled the lower floor, balconies and stairways, stood in silence.

The portrait was painted by Charles Sneed Williams, a distinguished Kentucky artist, and presented by the Kentucky State Medical Association. The bronze plaque was the gift of the personnel of the State Department of Health and of the various county health departments in the State. The building was purchased by the Commonwealth of Kentucky.

Preceding the dedicatory exercises, members of the Kentucky State Medical Association, personnel of the State Department of Health and the county health departments, and invited guests were entertained at a buffet dinner given by the Jefferson County Medical Society and served in the new building.

Dr. J. Duffy Hancock, President of the Jefferson County Medical Society, was Master of Ceremonies. Through the courtesy of the management, the address of Governor Chandler was broadcast over Station WAVE.

DEDICATORY EXERCISES

CHAIRMAN HANCOCK: Ladies and Gentlemen: The exercises this evening for the dedication of this building for the service of the people of Kentucky, in the name of a great physician, will be opened by a dedicatory prayer by the Reverend Father F. Newton Pitt, Louisville.

REVEREND FATHER F. NEWTON PITT: We are gathered here this evening for a significant ceremony—the dedication of this building to the relief of suffering humanity. It is significant in its implications for the future, for the work which is performed under this roof is directed to the prevention of pain as well as to its relief. What a connotation that word has! Suffering is the lot of man. It is with death, one thing that seems to be universal and inevitable in this world. Go where we will, the grim specter of pain is encountered. In the cities, we see it on the streets, in the homes of the poor and the rich, in the hospitals and institutions of all kinds. Out in the country, suffering stalks along the highways; in the fields and farmhouses, everywhere we turn, we meet it face to face, and no one ever completely escapes it. There can be no doubt about it, physical suffering does exist, bitter, cruel, sharp, barbarous. It fixes itself in the living flesh, tears at a man's heart, fastens upon his limbs: unmercifully, cynically, it drags husband and wife apart: it takes a father from the love of his children; it overwhelms us, destroys our energy, and renders us fit for nothing. Physical suffering is hard to bear. Whatever may be said to the contrary, good health is undoubtedly one of the greatest temporal blessings. Any lengthy illness demoralizes a man and enervates him; he has no longer the strength to think nor the heart

to love; he feels a burden to his friends and odious to himself, whilst inertia and incapacity for action make a darkness as of night around his soul. And, then, there are some pains so sharp and so lacerating that death itself would seem preferable. In very truth, physical torture is a terrible thing.

Against this universal affliction the science of medicine, personified in the physician and the nurse, has waged an age-old struggle. The battle front has been widened, the fight has never ceased, but the battle has not been won, nor will it ever be completely won, for suffering is the lot of fallen man. It came into the world with sin and death and it will be with us to the end. But the great mass of physical pain has been lessened; its forces have been weakened, its opportunities made fewer, and much useless suffering has been prevented by the physician and the nurse, the scientist and the health worker. Our prayer is that this work in behalf of suffering humanity may go on. The work actualized for us in this building will do much to make our city and our State a safer and more comfortable place of habitation; it will bring joy to many homes, security to anxious parents, safety to children, comfort to the old, and general well being to the community.

And so tonight we dedicate this building to the service of suffering humanity. We ask our Divine Lord who understood suffering, who felt the agony of piercing pain, to watch over and guard this place. We ask the suffering Savior, who, by miraculous power, healed the sick of all manner of diseases, who made the lame walk, the blind see, the deaf hear, and even the dead to rise again—we ask Him to guide and direct all those who will here carry on the service for suffering mankind, helping them to remember always that whatever we do in word or in work should be done in the Holy Name of Jesus.

May the blessing of Almighty God the Father, God the Son and God the Holy Ghost descend upon us all and remain forever. Amen.

CHAIRMAN HANCOCK: Your Excellency, Reverend Father, Mr. President, Dr. McCormack, Members and Guests: The Jefferson County Medical Society extends

to all of you tonight a most hearty welcome and we hope that you have a very enjoyable evening. This assemblage is a historic as well as a happy one. As you know, this annual meeting is dedicated to the memory of Dr. Joseph Nathaniel McCormack, who was a pioneer not only in public health work, but in the development of organized medicine. No more fitting tribute or memorial could have been conceived than this building, which uniquely serves as a joint home for the State Medical Association and for the State Board of Health.

Our first speaker this evening, representing the Kentucky State Medical Association, is one who well deserves this selection. For many years he has been an active practitioner; he has done much to elevate the standards of medical practice in his part of the State; he has given untiring service not only to the State Medical Association, but to the smaller units; he has been President of the State Medical Association, in which position he demonstrated constructive ability of high order; he has been a Delegate to the American Medical Association, and recently his principal contribution to our profession has



J. DUFFY HANCOCK, M. D.

been his untiring and effective work as chairman of the committee for the procurement of this building. The plaque, which will be unveiled later in the evening, is largely the result of his thought.

It is a pleasure to introduce to you Dr. C. C. Howard, of Glasgow, who will speak for the Kentucky State Medical Association.

JOSEPH NATHANIEL McCORMACK, THE PHYSICIAN

C. C. HOWARD, Glasgow: Mr. Chairman, Ladies and Gentlemen: I am indeed grateful to our Program Committee for this undeserved honor.

This is a red-letter occasion in the annals of our accomplishments; an occasion of joy and gladness; an occasion of hallowed memories that fill us with gratitude for the past, and of delightful anticipations which betoken our confidence and courage as we face the future.

This is a proud day for Kentucky, for it represents the successful completion of a project which has been near to our hearts and uppermost in our minds for many months. Everyone who has the welfare of our State at heart rejoices today at the opening of this beautiful building, with its modern equipment and attractive architecture.

This new State Health Building represents an ideal. In olden days costly structures were erected to commemorate the deeds of some king or warrior, but now we erect buildings and dedicate them to the advancement of the arts of peace and the upbuilding and healing of the people. As you pass through this splendid building and note its ample and well-planned provisions for the comfort, health and convenience of those who will work within its walls, you have good reason to be proud of that ideal which has herein become embodied in brick and stone. And back of that ideal is the thought which has been the foundation of this great republic of ours, the secret of its permanence and power, as well as the prophecy of its future advancement—the aspiration toward kindness, helpfulness and betterment. Those who have labored so tirelessly and earnestly toward this

project, now see the result of their efforts. It is eminently fitting that such a result should crown the devoted and self-sacrificing work of those who have given freely of their time, and energy in its behalf.

The dedication of a building such as this represents a consecration and a sacrifice—an offering on the altar of the noblest aims of civilized mankind.

This splendid building is a monument, not to public vanity, or private gain, but to unselfish effort for humanity and science. Those who tracked the toilsome pathway, those who bore the heavy burden, may well be pardoned a feeling of exultation and a sense of triumph.

This building is of economic importance to the State. When a man is saved from death or rescued from sickness, he returns to the support of a family which might otherwise be a public charge, becomes again an industrial unit, a factor in the production of wealth, a factor which adds its share to the power and greatness of the Commonwealth.



C. C. HOWARD, M. D.

A year or so ago American newspapers carried an interesting discussion as to what were the chief material blessings accruing from the possession of great wealth. The final conclusion was that the chief benefit the rich man possessed was

the ability to command the best medical and nursing skill when he or those dear to him were ill, especially when there was danger of death.

There have been autocracy and individualism, but the new life shall be one, not of socialism or communism, but of fraternalism. We are the keepers of our brother's body, his health, his happiness, his children and his chance to develop and to work out his destiny. It is this altruistic spirit which should control our profession.

There is no ease in the March of Medicine. Tens of thousands of ardent workers are pushing out into new fields; lives are to be saved, pain relieved. To keep the doctor and public health worker up to date and bring the medical student abreast of the selected information he needs, are both the function and the duty of such organizations as Medicine and State.

The greatest asset any State can have is security in the health of its citizens. A pure water supply, wholesome food, protection from malaria, typhoid fever, smallpox, scarlet fever, and tuberculosis—indeed the control of as many factors as possible that are detrimental to health—are all essential in laying the basis for a sound community life. The security of health is really more important than the school; for there is no particular advantage in giving expensive educational training to children who are going to be allowed to die of typhoid fever, malaria or tuberculosis before they can become assets to the community.

Let us remember that the knowledge we possess as the result of the work of our glorious predecessors should be only a stimulant to our efforts for the betterment of our own health and that of our neighbors, that is, public health.

Our great responsibility as doctors and public health workers is so to inform all the people under our jurisdiction in matters pertaining to the causes of communicable diseases and the methods of their prevention that they will be eager to apply the measures that are known to be effective for their protection. This is not to be easily accomplished, but, then, one of the satisfactions derived from our vocation is that anything that is worth while is somewhat difficult to accomplish. By persistent efforts in this direction, progress has been made, and this should encourage us to go forward with the hope and expectation of still greater and more rapid progress in the future.

Who can say, if we are determined in our efforts, that the words of the ancient prophet may not yet be realized: "And the inhabitant shall not say I am sick." (Isaiah 33:24.)

My Fellow Citizens and Colleagues: We are here to dedicate this noble structure to the memory of one of Kentucky's best and greatest physicians—Dr. J. N. McCormack, whose life span began in the year that the American Medical Association was formed, and ended in a peaceful sleep on May 4th, 1922.

One needs only to read the medical records to recognize the vast influence of that great doctor. Not only were new State and county medical societies organized, but almost every State established a medical magazine, modeled after the Journal of the A. M. A., in which could be carried on the aggressive campaigns for public health, welfare and needed laws to uphold their theories. This was the epoch of new law making for health, of new hospitals, new institutions to investigate the causes of diseases and the reforming of the medical education of the country. And the credit must be given to the great personality of Our doctor.

After studying such a character as Dr. McCormack, one is convinced that his name should be enrolled among the great in American medicine, especially as a great organizer who perfected the



JOSEPH NATHANIEL McCORMACK, M. D.

plans in the great fields of Sanitation and Public Health.

In every generation there are noble souls who have won the respect and love of their respective generations. It is they who raise the average of humanity and, by their words and deeds, brighten the world about them.

A speaker cannot do anything for the perpetuation of the glory of extraordinary souls. The Sage was right when he said that "Their deeds alone can praise them." No other praise is of any effect where worthy names are concerned. It needs but the simple story of deeds faithfully performed to create and sustain glory.

To speak words that shall be worthy of Dr. McCormack is a difficult, if not a hopeless task. I never craved more than today the gift of clear insight and accurate, sympathetic statement. For I think that the real lessons of this life which we commemorate are tremendously important to us at this hour.

The world is better because Dr. McCormack lived. Life gave him up reluctantly and Death was proud to take him. But Death cannot take from us the memory of what he was or what he did. He loved his fellowman, among whom he moved as a prince in gentleness and kindness. Never happier than when he was doing a favor for a friend, devoting his time and money to good causes of constructive charity, kneeling down that some other might step up, lending his strength to compensate the weakness of a neighbor, and holding the needs of mankind close to his heart, Dr. McCormack lived the life of the Good Samaritan and died in the faith of men who love their God and their fellowman.

We have at this hour no more sacred duty than the dedication of this memorial to this noble man.

Let us, then, with earnest hearts and with exalted faith and hope, solemnly consecrate this memorial building to its high and holy purpose—to the alleviation of human misery, to the relief of pain and suffering and to the successful battle with disease and death.

CHAIRMAN HANCOCK: At this time I would like to interrupt our scheduled program to present our President, Dr. William E. Gardner, of Jefferson County, who will say a few words. (Applause.)

PRESIDENT GARDNER: Governor Chandler, Dr. McCormack, Mr. Chairman,

Guests, Members of the Medical Association: I am sure we are all quite happy to be here on this occasion. We greatly appreciate the hospitality of the Jefferson County Medical Society in having provided this program. I am sure all of us are proud of this beautiful building. I had occasion to refer to it at Richmond last year, in the brief talk which I made at the dinner during the annual meeting, and I was enthusiastic and wanted many of you to see this building as soon as possible. I assume many of the doctors of the State have seen it before, passing in and out, but there must be many who have not heretofore had such an opportunity. This meeting will certainly be one of the highlights of this session of the Kentucky State Medical Association.

I have been very happy to see such a large attendance upon our scientific session today. I am greatly gratified that the crowd is so good tonight, and if we can have as many in attendance at our annual subscription dinner tomorrow night I shall be very happy. We shall, on that occasion, as you know, have a distinguished guest.

It is a particularly happy occasion



WILLIAM E. GARDNER, M. D.

tonight that we not only have had the opportunity of hearing Dr. Howard, who has worked so earnestly in the preparation of the memorial which will be unveiled, but also that we have the honor of having our distinguished guest who will be presented to you somewhat later. It has been my privilege to work within the past two and a half years with our guest, and I know his earnest interest in affairs of health. He has already demonstrated, in many ways, that sincere interest, so far as the care of the mentally ill is concerned, but, in a much broader sense, his interest in the health of all the people has been demonstrated on more than one occasion. As I say again, we are very happy to be here and I am sure that I represent the sentiments of the Kentucky State Medical Association when I express to Dr. Hancock and the Jefferson County Medical Society our great appreciation of this privilege. (Applause.)

CHAIRMAN HANCOCK: Before presenting our distinguished guest this evening, who will speak for the Commonwealth of Kentucky, I would like to remind you that our State has had many illustrious Governors. Those who have left the most lasting impression are men who have been interested in advocating and enacting some definite relief for outstanding needs of the citizens of the Commonwealth. Our present Governor has instituted many changes, some of them controversial, most of them rather generally acceptable. I am sure, however, that of all his contributions the ones which are most likely to make him remembered by the generations to come are those which have to deal with the health of the people of Kentucky, and in this work he has safeguarded the interests not only of the underprivileged, but of the fully privileged and of the often forgotten entirely unprivileged citizen.

In his work he has had a conception of public health which seems most reasonable to all of us. He has taken the position that medical care should be controlled and supervised by medical men, not by self-seeking politicians, and not by sincere but often misguided laymen. He has, of course, met with considerable opposition on some of his measures from those who had not the broad vision to realize, as he did, that whatever is done for or through organized medicine is bound to be necessarily linked with the improvement in public health. We only wish that all other public officials had the same concept of adequate medical care that Governor Chandler has.

The intangible results of such an attitude on the part of our Chief Executive are, of course, remarkable in extent, but most difficult to evaluate. However, there are six or seven very definite, concrete evidences of his faith in scientific medicine. In the first place, out of the emergency fund he himself appropriated \$50,000.00 which was required for the opening of the Hazelwood Sanatorium for the aid of the tuberculous. From this same fund he appropriated another \$65,000.00 which was used to establish thirteen new county health units after the disastrous flood of 1937. He was instrumental in removing the \$2.00 a gallon tax on alcohol used for scientific purposes in the various hospitals throughout the State. He secured the enactment of the premarital examination act which was designed to lessen the incidence of venereal disease and the consequent curse on the newborn.

I would like to digress here just for a minute to call attention to the sincerity of the Governor in this particular matter. I am reliably informed by one who was present at an informal conference at which this bill was discussed, that there was considerable opposition to the bill on the part of certain public officials whose incomes would be reduced should the bill be enacted. The Governor was told of this opposition and of the threat that it would ruin him politically should he support the bill. He replied that he would rather sacrifice his political future than be even indirectly responsible for the birth of a single blind baby in Kentucky. (Applause.)

He also helped to enact into law the non-profit hospital insurance act. This act was necessary to safeguard the interests of the people of the low income group who had enough self-respect to want to pay their bills if some plan could be worked out. He is, of course, the one man most responsible for the non-political medical care which now exists in our State eleemosynary institutions. These are some of the things that he has done for the State at large in a rather direct way.

Finally, so far as this building is concerned, we must remember that he was the Chairman of the State Real Estate Commission which purchased it. For these and many other things which he has done for the doctor, and indirectly for the entire State, he is so happily known to all of us that it is not necessary to introduce him, but simply to present to you the Honorable Albert Benjamin Chandler, Governor of the Commonwealth of Kentucky.

JOSEPH NATHANIEL McCORMACK, THE PUBLIC SERVANT

HONORABLE ALBERT B. CHANDLER: Dr. Hancock, Dr. Irvin Abell, President of the American Medical Association, Mr. Commissioner of Public Health, and my fellow Kentuckians: I very much appreciate the generous words which Dr. Hancock has spoken with respect to the activities of the present administration of public affairs with regard to public health. I have the feeling that if we have accomplished something during the last three years for the benefit of public health in Kentucky, it is largely due to the leadership and vision and influence of the Kentucky Medical Association and Dr. Joseph Nathaniel McCormack.

Tonight my presence here upon this occasion is to indicate again to you, and to each of you, my continuing interest in public health in Kentucky, and to testify to my admiration and respect for Dr. Arthur McCormack and his generation. It would be easy for me, upon any occasion, to testify to the greatness of an Irishman. Whatever their walks of life or their professions, the Irish have, through all the centuries, fought for their beliefs. Occasionally they have fought for their rights and sometimes they have fought just for the love and glory of fighting.

We are, upon this occasion, about to dedicate a useful memorial to a Kentucky Irishman who was called during his time a militant scientist. Standing tonight

on the ramparts of Valhalla, he, I believe, sees us all and approves of the work of those that he left behind. Tonight I want to reiterate my position with respect to the medical men of Kentucky and say that I am willing to trust you with the health of the people of Kentucky and, if necessary, I am willing to fight that no one take from you that great trust.

The rebuilding of the public institutions of Kentucky, the restaffing of its hospitals, now under the direction of Dr. Wilson, will be accomplished step by step. I ask that you be patient and lend to this administration of public affairs your support, because these are changes that could not have been made in other years; they will be made definitely and certainly and very soon.

As I have said on numerous occasions to Dr. Bradley and others of my good friends, medical men in Kentucky, we will name superintendents to head the State institutions of this State who are subject to removal only for cause and who, in time, will guarantee a personnel, that will give medical and nursing treatment to the unfortunate men and women of Kentucky in a degree not given in any other State in America.



HON. ALBERT B. CHANDLER

I am proud to be the Governor of a State that can trust its doctors to handle the affairs of its people with respect to illness, and I am persuaded, Dr. McCormack, that if every State were as fortunate as we are in having the personnel of men and women interested in public health, there never would be any danger of



MC CORMACK

1847 - 1922

THE PEOPLE OF THE COMMONWEALTH OF KENTUCKY
AND THE KENTUCKY STATE MEDICAL ASSOCIATION
DEDICATE THIS BUILDING TO THE MEMORY OF
THEIR ILLUSTRIOUS SON.

DR. J. N. MC CORMACK

HE WAS A PIONEER IN THE TWILIGHT ZONE OF
MEDICINE WHO LIGHTED THE CANDLE OF PUBLIC HEALTH.
THIS FLICKERING FLAME GREW UNTIL
IT SHED ITS BEAMS AROUND THE WORLD.

MAY THIS FIRE BURN ON AND ON UNTIL MANKIND
IS FREED FROM ALL PREVENTABLE DISEASES.

OCTOBER 4, 1938

any quacks or misguided people taking over the affairs of public health in America.

Joseph Nathaniel McCormack was born in the lower part of Nelson County, only a few miles from the birthplace of Abraham Lincoln, on the 9th day of November, 1847. He had many of the same qualities and characteristics of the Great Emancipator. While his industry and personality would have made him successful in any field, he chose medicine, but he was not content simply to practice medicine and to limit his interest to his benefactions in one community. He wished to convert men and women to improve hygiene and sanitation. With indomitable will and persistent purpose, he made the people of his day realize the necessity of preventing disease and outlawing quackery.

Kentucky is proud, and justly so, of its contribution to medical history. Few medical men have been more beloved or more widely honored than Daniel Drake, Ephraim McDowell, Dudley, Yandell, and Brashear. Dr. J. N. McCormack was a worthy successor to these early Kentucky doctors. He differed from them in one respect: the former taught men how to relieve human suffering, whereas Dr. McCormack devoted his time and his energies to showing how they might save themselves from sickness and prolong their lives by preventing disease.

In 1879, Dr. Luke B. Blackburn, then Governor of Kentucky, appointed Dr. McCormack as a member of the State Board of Health because of his heroic service in the yellow fever epidemic prevailing in Bowling Green and vicinity at that time. Four years later he was elected Secretary of the Board, and he gave his time and labor unremittingly to the exacting work of that office. Recognizing the need for political power to accomplish his purpose for the good of the State, he combined with rare ability the art of the politician with the skill of the physician.

It is hard for us to realize now the complete disregard of sanitary measures in the State fifty-five years ago. The water supply in our cities and towns was impure; drainage was either non-existent or notoriously imperfect. Diphtheria, typhoid fever, dysentery, and other filth-borne diseases prevailed everywhere and broke out with the regularity of the seasons. Advertising charlatans and traveling nostrum vendors preyed upon our people, relieving them of their money, but not of their diseases. Dr. McCormack realized that it would be necessary to have the full cooperation of his fellow doctors and that it was necessary to educate the people generally, if sanitary laws were to be enacted and enforced. He set about, therefore, to reorganize the Kentucky State Medical Association, of which he had been voted President, and he began the establishment of affiliated county societies throughout the State. He chose for himself a difficult task. He determined that the State legislature should appropriate sufficient funds to carry on the necessary work in public health. He prepared the bills that went before the General Assembly dealing with the prevention and control of disease and regulating the practice of medicine.

I feel that I do not deserve any credit for setting aside public funds that are presently available to meet the conditions of public health, because Dr. McCormack, the distinguished son of Dr. Joseph Nathaniel McCormack, knows how much money I have in every fund and how much I can spare and always gets all that is left before I have time to give it to anybody else. (Laughter.)

Dr. McCormack not only led the fight for better living conditions in his own native State; he carried his battle against disease into other States as well. He spoke, one time or another, in every State in the Union, and he was honored by being made Chairman of the Committee on Reorganization of the American Medical Association.

Dr. J. N. McCormack lived to see his hopes become realities. He lived to see the Board of Health, from its very humble beginning and practically without means, established in its own home in Louisville. He lived to see his own son take rank among the leaders in public health in the country and to become his own successor as the head of the Health Department of the Commonwealth of Kentucky.

Dr. J. A. Stuckey, of Lexington, said, at the time of Dr. McCormack's passing, that it was through the mutual confidence and aid of the medical profession, legislators, and the whole people that Dr. McCormack was able to accomplish so much.



THE UNVEILING

When the history of Kentucky in recent years is written later on, one of the bright spots of the present history of the State will be Dr. A. T. McCormack's and the Medical Association of Kentucky's great fight to prevent the people from suffering diseases during the terrific flood of 1937. Dr. McCormack recognized the need for cooperation. One of his favorite verses was:

**By mutual confidence and mutual aid,
Great things are done, great discoveries made.
The wise new prudence for the wise acquired,
And one great hero fans another hero's fire.**

By his own wish, no monument marks Dr. McCormack's last resting place. I believe he would approve the memorial that we are dedicating in his honor tonight. Here he carried on the work he loved so well. It is altogether fitting that this be known as the Dr. Joseph Nathaniel McCormack Health Center, and it is with pride and pleasure that I accept, upon behalf of all the people of Kentucky, this memorial to a man who loved his people and who worked during his lifetime for them. It is dedicated to the glory of God and, with its dedication, goes a prayer that the perpetual life of God's love continue to shine on Dr. McCormack, that his soul may rest in peace, and that his worthy son and all of us may continue, with God's help, to follow in his illustrious footsteps, relieving wherever possible the suffering of our people.

And now may I ask Miss Mary Tyler McCormack, granddaughter of Dr. Joseph Nathaniel McCormack, daughter of our beloved Commissioner of Public Health—and she will always remember this day because we dedicated this memorial on her own birthday—to unveil the dedicatory plaque while we stand and pay our respects to our beloved son.

The audience stood while Miss Mary Tyler McCormack unveiled the bronze plaque to and the portrait of Dr. Joseph Nathaniel McCormack.

CHAIRMAN HANCOCK: Our last speaker of the evening has been presented to you and has presented himself to you on numerous occasions in the past under varying circumstances. He has given us many years of distinguished service as Secretary of the State Medical Association, as Commissioner of Health of the State, and as Delegate to the American Medical Association. Last year he was given outstanding national recognition by his election to the presidency of the American Public Health Association.

Tonight, however, he appears as the humble, affectionate son, who will try to show how his father laid the groundwork for the present-day conception of the practice of medicine as evidenced by the American Medical Association. Dr. Arthur McCormack. (Applause.)

PROGRESS AND REALIZATION OF JOSEPH NATHANIEL McCORMACK IDEALS

ARTHUR T. McCORMACK: Governor Chandler, President Gardner, Chairman Hancock, Dr. Howard, and beloved friends and coworkers: I know you feel with me the deep emotions of my heart and soul as I stand before you tonight, humble in the presence of the memory of the greatest man I ever knew, trying my levellest best to follow in his footsteps and the footsteps of all his predecessors who helped to make him, as you have helped to make me, a servant of medicine and of the people of our Commonwealth. I know all the physicians present, at least, will understand that it is with some little difficulty that I am getting my soul and spirit and mind working in parallel columns again, because all of them are very much moved and it is difficult to express my thoughts.

On this occasion, especially, I could bring to you, as each of you who knew him could bring to me, hundreds of memories that would touch you and would touch me and would be mutually helpful to all of us. But, as Dr. Howard and the Governor both so well said, father asked that no monument be erected to him. He felt that the work which he had done, and which you are carrying on, was the best service that could be rendered in his name. I, therefore, know the joy that not he alone has, but all that galaxy of our sainted membership who, I am perfectly sure, are gathered together on another shore where they are still serving the Great Physician far more perfectly than we can, though with the same clear vision and the same clear faith that moved him then and by which



ARTHUR T. McCORMACK, M. D.

we are moved tonight and always will be moved in the service of our people.

Several years ago when Dr. Gorgas (whom many of you know as General Gorgas, but who told me when I asked him whether he liked to be called General or Doctor, that when he was issuing an official order, when he was doing some serious thing that involved the affairs of State, it was all right to call him General because you had to, but when he was loving folks and serving them and serving humanity and serving God, he liked to be called doctor and he hoped, when he went over to the other side, he would be introduced to the heavenly hosts as Dr. Gorgas and not as General Gorgas) was President of the American Medical Association, I heard him and father talking, and Dr. Gorgas told him about the remarkable develop-

ment in Panama. He impressed on father and on me as a youngster, the thought that medicine is a unified service; that it could never be divided; that no artificial lines or schools could ever make of any specialist, or any of the other servants of medicine, anything but physicians; that we should all remember always that we were physicians; that those in the front line trenches were those whose job it was to prevent disease—the health officers, the sanitary engineers, the public health nurses, the sanitary instructors and that legion of others in the laboratories doing research work but about whom few hear, about whom there is little noise—that they were all in the front line trenches in the preservation of public health. There would, he said, always be casualties that could not be prevented and, for that reason, the far greater number of personnel would always be engaged in the amelioration and cure of and relief from disease and pain and the prevention of invalidism as a result of it; that the hospital was the reserve force in the back lines behind those physicians who practiced in their homes, who furnished the great body of the shock troops against disease; and that all of us together must move forward with unity. Dr. Gorgas went on to say that in Panama, where this had been carried to a degree of perfection not then attained in any other place in the world, the sick rate was about a twenty-fifth of that of the ten healthiest cities in the United States and the death rate was less than half that of the ten healthiest cities in America.

Panama was a long way away. The plan that worked so well there would be impossible in the United States, and it is not suggested, in this reference to

it, that it should be adopted, but that we should adopt a purely American plan which will preserve the traditions of American medical practice, and seek the same results as were secured in Panama. It has taken us a long time to realize that what he said then, what father fought for all his life, what you are fighting for today, is realizable. It is realizable because we have the body of knowledge necessary to realize it, and all we need is the facilities, the funds, the popular education and public approval in order to accomplish our purpose.

In these recent days there has been a great deal said and a great deal of anxiety created in the popular mind and in our minds about a bogey that I want to help lay tonight, because the American Medical Association has determined that it is not to exist. With the assistance of the medical profession of this country, 110,000 of the best trained, best educated, best qualified men and women in America, we are going to treat the American people as we, the American public's family physician, are alone qualified to treat them.

Five years ago we were all rather astonished and alarmed when a monumental report by the Committee on the Cost of Medical Care was published—twenty-seven volumes of it. I don't suppose anybody but the proofreaders and the authors of the particular articles ever read much of it, because, before it was published, those responsible for its compilation had arrived, without rhyme or reason, at certain conclusions communizing or socializing medicine, putting it under lay control, taking away from the profession that is alone qualified to solve the problems of public health and of medical care all responsibility for them and making the physicians hirelings of the system. We were so astounded that we didn't read the factual reports on which it was based and, as a result, didn't draw the right conclusions. In fact, we were about as bad as the Committee itself. We just saw red and got excited. You know we have in the United States a way of doing that sort of thing. That report has been followed by careful propaganda calculated to build in the public mind a distrust of the medical profession. Had the medical profession in every State in the Union had its skirts as clean, had its record as clear as the medical profession of Kentucky, such propaganda would never have gotten a start anywhere else, any more than it has here. If in every other State we had been able to convince honest, upright executives and legislators, as we have Governor Chandler and the members of the General Assembly of Kentucky, represented by several of its most distinguished members here tonight, they would have had no more to fear in any other State than we have to fear in Kentucky, as far as any threat to our opportunity for service is concerned.

But, from time to time, things continued to happen and we began to feel this unrest that everybody feels nowadays; nothing seems to be exactly secure. As far as I am personally concerned, I think that is rather a good thing, because there is but one security and we all know that, and that is that God's in His heaven and all's right with the world. If we would always remember that, we would forget about these bonds and things that are slipping out, or this real estate whose value is sort of moving off, or this income that is decreasing; we would forget about them and remember that God's in His heaven and all's right with the world, that everything's all right and all we have to do is to go to sleep and wake up in the morning and go to work again and do the best we can that day and, eventually and eternally, we will be all right.

The President of the United States, a great humanitarian, may differ from our views; we may differ amongst ourselves as to many of his views, but there is no doubt about the sincerity of his interest in the great common people of this country. He appointed a committee to coordinate the federal activities in regard to public health. Now, I would say perfectly frankly that he didn't do it as well or as directly, nor could he, as the Governor of the Commonwealth of Kentucky did when he passed the Reorganization Act and reduced the innumerable boards and commissions and officers of this State to a compact body under the guidance and control of a great executive. The thing was too complicated; there are too many office holders in the federal government; they didn't want the government reorganized on any sane or sensible basis, and they were unwilling to delegate the power to anybody that it be done.



MRS. JOSEPH NATHANIEL McCORMACK
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Public health is divided in Washington amongst twenty-seven different bureaus. While the United States Public Health Service and the Children's Bureau are the most important, when I go to Washington to represent you in consultation with the government there, I am frequently compelled to spend four or five days calling on the different heads of bureaus in whose action you have a direct interest. Nineteen different bureaus have direct influence in the control of different branches of nutrition and diet, for example, and that is only a fair example of how complicated these things are.

A committee was appointed to coordinate these activities, and among the other subcommittees appointed was a Technical Committee on Medical Care. It was unfortunate nomenclature. As soon as they said medical care, we thought of the Committee on the Cost of Medical Care and its biased report that prejudiced us, that insulted us, that injured us within our innermost souls. So, when



JOSEPH NATHANIEL McCORMACK, M. D., AT AGE OF 49

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this Committee on Medical Care published its report, we just decided it was in the same category as the other; we didn't read it, we had never paid any attention to its contents, we just took it for granted it was all bad, and, so, we proceeded to fulminate against it amongst ourselves. Nobody else paid much attention to what we were saying, because the things we said were not in accord with the popular or public psychology. We weren't winning people to our viewpoint by what we were saying, we were talking like we were opposed to good health, as if we were opposed to sound medical service. Of course nobody that spoke was, but it just sounded like we were, as it was interpreted in the press.

The American Medical Association is the body of American medicine; it is a democratic organization composed of the State Associations, which, in turn, are composed of the county societies, and each is governed, and its policy is directed,

by a house of delegates. The House of Delegates of the American Medical Association met in San Francisco and again reiterated its stand (keep this in mind because this is important in our attitude toward the public and in winning the public's attitude toward us) that since the days of Hippocrates it has been the high purpose of medicine to serve, to improve its methods, to forget itself, to do all those things that will help to make our people healthier and happier and more effective and to make them live longer and, while living longer, to be more effective throughout that longer life. That has been the purpose of our whole action.

When the report of the Technical Committee was presented to the American Medical Association, immediately for the dozenth time, the Association stated that it would be glad to confer with the representatives of the federal government, at any time, in the formulation of any policies which would improve public health and medical service for the people of this country.

A conference was held in Washington, the National Health Conference, at which all those organizations that have influenced legislation in this country for the past fifty years were represented. It was one of the most intelligent groups that has ever been gathered together. Of course, there was a lunatic fringe to it, as there is to every group of American citizens except the Kentucky State Medical Association, but they gathered together in Washington, and the American Medical Association, through its President and its officers, stated its position.

Now, when it comes to talking to one individual, we doctors are the best psychologists on earth, except somebody in love—I think that is the highest form of psychology, because there you are working to win; but doctors, next to lovers, are the best psychologists in the world, when talking with one person, the patient; they know how to win his confidence, if they are good doctors; they know how to get him to do what he ought to do; they know how to prescribe for him and how to lead him right. If they are very successful physicians, they know how to translate that confidence to the family. But we are such individualists that we curl up within ourselves at criticism. We are unused to appearing before public audiences and there winning our cases, as the lawyers do before the juries and the courts and the hustings, where they have the advantage over us of the knowledge of mass psychology, as distinguished from individual psychology. So when a retired bucolic physician, with a Jehovah complex, arose and delivered a diatribe, an insulting diatribe against medicine, of which he had at one time been an ornament, but from which high estate he had long since fallen, instead of realizing and making a psychiatric diagnosis of his case, as Dr. Gardner or Dr. Ackerly or Dr. Wilson would have done, we all got mad, and we got ridiculously mad. Then, after we got mad, we said a lot of foolish things that prejudiced the rest of the audience against us and we were in a pretty bad fix when we got through.

It is a joy to say to the Kentucky State Medical Association that the President of the American Medical Association, Dr. Irvin Abell, with his masterly and statesmanlike appearance, with his calm, sweet face, his magnetism, his delivery, his ability, his honesty, which were so evident that nobody could look at him and question them, proclaimed to that audience and to the American people the willingness of American medicine to sit around the council table and confer with any well wisher of the American people. You ought to have heard the applause, and you ought to have seen that remarkably dynamic person, the only one that I know who could have replied to Dr. Abell in kind, Miss Josephine Roche, who has all the charm of femininity, in addition to all the things he has. She sort of put it over him and said a little better than he did the things he had said, and talked about him better than he did about her, and that was doing pretty well. So we went away in a very much better humor, although we were hurt at some of the things that were said by some of the raucous crowd that were there.

But nearly everybody there said just what everybody in America would say: We believe in our family physician, we want our doctors to give us a plan, we want medical leadership. We had been asleep at the switch, we hadn't been doing anything but being mad for five or six years, and that doesn't get you any-

where; it doesn't do any good to sulk in your tent, especially if you are being licked a little—that is the time to smile and hold up your chin, and every now and then you will see a way to run through the holes they leave for you and “take them.” That is what we did.

The other day the Board of Trustees of the American Medical Association called a special session of the House of Delegates in Chicago. All but five of the members, from all the States in the Union and from all the scientific sections of the Association, were present. A master committee of twenty-five members, no one of whom was a health officer, no one of whom was an employe of any philanthropy, twenty-five physicians who practice medicine every day, who make their incomes practicing medicine in private practice, were appointed as a master committee to handle and discuss the five recommendations that had been made by the Technical Committee on Medical Care. Then the chairmen of the five subcommittees assembled the opinions of the committees in regard to each of the five sections together in a report. That report was presented to the House of Delegates.

Very briefly, I want to call your attention to these recommendations. This will all be published in the JOURNAL, but the Council and the House of Delegates



**McCORMACK HOME, BOWLING GREEN, KENTUCKY
IN WHICH THE STATE BOARD OF HEALTH WAS HOUSED FOR 25 YEARS**

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of this Association felt that all the membership had a right to know about this thing, because everybody has been on the anxious seat about it and we have had this bogey of social medicine before us, so that it has kept us from thinking straight. It is important that we get it straight in our own minds, so that we will know the purposes we have and the high principles on which we are conducting our campaign for the benefit of the American people and for the preservation of our own right to think and practice medicine for them in the way that they are used to having it practiced and in preserving the American traditions and ideals in the practice of medicine.

The Technical Committee on Medical Care made five recommendations. The first was in regard to the expansion of public health and maternal and child health services. “It is recommended that federal participation in the existing co-operative program should be increased, with a view toward equalizing the provision of general public health services throughout the nation.”

You will recall, and the members of the profession in Kentucky are familiar

with the fact, that, under the Social Security Act, Title Six, there was provided an appropriation of eight million dollars for the extension of public health services in the counties of the United States. Kentucky gets about \$200,000.00 a year from that fund, which is matched by State and county appropriations. With that additional \$200,000.00, you have been able greatly to expand the county health service in Kentucky and make it more effective. And it is all under your control, because every board of health in this State is composed of three practicing physicians and two other men, and the three physicians determine all their policies. If they meet and do their jobs right, they determine them right; and if they do not meet and do them right and let the health officer do them wrong, that is their business. Under our system, whether they do it right or wrong, they get away with it pretty well until we get down and pray with them a little while, and we generally get it straightened out.

Under that title, no new federal bureau was created, no bureaucracy was erected, no federal control over public health was created, not an additional official was created in the United States Government. That is the only title of the Social Security Act about which that can be said.

The first recommendation is that federal participation be extended and that eventually, within ten years, the appropriation of eight million dollars be increased to two hundred million, giving special attention to these subjects: The eradication of tuberculosis, venereal diseases and malaria; the control of mortality from pneumonia and from cancer; mental hygiene, industrial hygiene, and to the protection of the health of mothers and babies.

The report of the Committee of the American Medical Association, I want you to bear in mind, was adopted by a unanimous rising vote of every delegate, every member of the House of Delegates of the American Medical Association, and that vote was taken on exactly the stroke of the hour of the 150th year after the adoption of the Constitution of the United States in Philadelphia. When the motion had been made by Dr. Donaldson, the Chairman of the Committee, to adopt the report, I had the privilege of seconding that motion, and, in seconding it, called the attention of the representatives of American medicine to the fact that when the distinguished statesman who seconded the motion to adopt the Constitution of the United States made the motion, he asked that the delegates to the Constitutional Convention stand and record their votes, in the presence of Almighty God, as the representatives of their several States. In the same way, every member of that House of Delegates stood, and it was unanimously approved that this recommendation should be handled as follows, and I am going to read you the exact words of that recommendation because it is important to you.

Under Recommendation One on Expansion of Public Health Services:

(1) Your Committee recommends the establishment of a federal department of health with a secretary who shall be a doctor of medicine and a member of the President's Cabinet.

That would have happened during the administration of President Theodore Roosevelt, if it had not been for the shortsighted failure of a few of the heads of organized medicine at that particular time, who misguidedly misdirected that movement and failed to cooperate with the orders of the American Medical Association then unanimously adopted, as these were.

(2) The general principles outlined by the Technical Committee for the Expansion of Public Health and Maternal and Child Health Services are approved and the American Medical Association definitely seeks to cooperate in developing efficient and economical ways and means of putting into effect this recommendation.

Now get this, because it is very important and is in exact accordance with the principles of this Association since its beginning:

(3) Any expenditures made for the expansion of public health and maternal and child health services should not include the treatment of disease except so far as this cannot be successfully accomplished through the private practitioner.

The section dealing with expansion of hospital facilities is, Governor Chandler, one in which I am sure you will be particularly interested. It reads:

The Technical Committee has made a special study of deficiencies in existing hospital and other institutional facilities. It is impressed with the increasing hospital and other institutional facilities. It is impressed with the increasing. Without adequate hospitals and clinics, it is impossible to provide many of the important services which modern medicine can furnish. * * * The Committee recommends a ten-year program providing for the expansion of the nation's hospital facilities by the provision of 360,000 beds—in general, tuberculosis and mental hospitals, in rural and in urban areas—and by the construction of 500 health and diagnostic centers in areas inaccessible to hospitals.

For general and special hospitals, for construction \$63,000,000 a year is provided; for tuberculosis, \$15,000,000; for mental diseases, \$32,500,000; and they are to be built in places where mental and tuberculosis hospitals are needed. We already have proof about our needs, and if this section of this law and these appropriations are made, Kentucky will be among the first States to which these additional facilities will be extended.

The American Medical Association, in its approval of this section, that existing hospital facilities should be used to the utmost and that hospitals should be built only where need is shown. Now we are ready to show the need.

In the third section every practicing physician is vitally interested, because we know in Kentucky that between sixty and seventy per cent of our people are unable to pay for prolonged or emergency illness and that at least forty per cent of them are unable to bear any of the expense of medical care at all. Knowing that, we have freely given our services and extended ourselves to the utmost of our ability; we also realize that, under modern medical care, facilities are necessary which we are unable to provide for our people. We must frankly meet the fact and admit it. Less than ten per cent of the people of Kentucky are able to purchase private nursing service at present rates; not more than thirty-five per cent of our people are able to pay for hospital service at present rates. We know that perfectly definitely; it is an established fact; we know that something has to be done about it; we know we can't continue, as a profession, to bear the burden alone, and that we are going to have to have assistance in bearing the burden, but we are going to help solve the problem, we are going to render the medical care.

The Committee is impressed with the evidence now available that one-third of the population which is in the lower income levels is receiving inadequate general medical services. This applies to persons without income and supported by general relief and to those being supported through old-age assistance, aid for dependent children, or work relief, and also to families with small incomes. These people are doubly handicapped. They have higher rates of sickness and disablement than prevail among groups with larger incomes, and they have lesser capacities to buy and pay for the services they need. Current provisions to assist these people—though generously given in many State and local governments, by voluntary organizations, and by professional practitioners—are not equal to meet the need.

Further:

This part of the program might be begun with the expenditure of \$50,000,000 the first year and gradually expanded until it reaches the estimated level of \$400,000,000, which would be needed to provide minimum care to the medically needy groups.

The American Medical Association says:

Your committee advocates recognition of the principle that the complete medical care of the indigent is a responsibility of the community, medical and allied professions, and that such care should be organized by local governmental units and supported by tax funds.

Exactly a parallel plan with that of our county health departments, and based on the experience we have had with those departments.

I want to say to the medical profession of Kentucky with great pride, as we sit here tonight and dedicate this memorial, that the greatest contribution he made to medicine, the thing which today has saved us from socialization and lay domination, was the creation in the County of Jefferson of the first full-time county health department, of which the late Dr. B. W. Smock was the county health officer. Through your wise vision, your loyal support, your sympathy and understanding, you have built them in eighty-nine other counties of Kentucky, and similar work has been done in Alabama and Mississippi and Virginia and North Carolina and a number of the other Southern States and in a few of the northern States.

It was this plan which not only captured the imagination of the Congress in the passage of Title VI of the Social Security Act, but won the confidence of the committee that was investigating this matter, as the family physician of America in the American Medical Association. They saw, for the first time, the possibility of the erection of a structure that could give medical service without political or federal domination.

Since the indigent now constitute a large group in the population, your committee recognizes that the necessity for state aid for medical care may arise in poorer communities *(that is more than half the counties in Kentucky, for example)* and the federal government may need to provide funds when the state is unable to meet these emergencies *(as this State would be wholly unable so to meet them without absolutely bankrupting the treasury of the State. I know enough about Governor Chandler's funds to know that.)*

You will read all this in the JOURNAL, because I believe the minutes of the House of Delegates of the Association, the November JOURNAL, is one JOURNAL everybody is going to read: I know everybody will read it who is interested in human welfare; I know every physician, who is interested in the preservation of the purposes and principles of American medicine, will read every word of those minutes; I know every patriotic physician will read it, and, therefore, I know all of you will read it.

Governor Chandler, before you tonight, and in Louisville, are more than half of the practicing physicians of Kentucky, gathered to consider these important matters for the welfare of our citizens, gathered here largely because we have been charged by you and your associates with the responsibility for the care of the insane and the feeble-minded, in addition to the prevention of disease and the medical care of the people of our State.

In regard to a general medical program, all of us had the idea that this social medicine business was going to come right now, that State medicine was right around the corner. Prosperity was around the corner once, but we never did catch up with it; State medicine was around the same kind of a disappearing corner apparently, because here is the recommendation of the Technical Committee in regard to a program of general care. Think of this carefully, and think of it as your committee did. This committee was presided over by Dr. Fred Rankin, of Lexington. The Technical Committee said:

The Committee directs attention to the economic burdens created by sickness for self-supporting persons. There is need for measures which will enable people to anticipate and to meet sickness costs on a budget basis. No conclusion has emerged more regularly from studies on sickness costs than this: The costs of sickness are burdensome more because they fall unexpectedly and unevenly than because they are large in the aggregate for the nation or, on the average, for the individual family. Except in those years when unemployment is widely prevalent, sickness is commonly the leading cause of social and economic insecurity. Without great increase in total national expenditures, the burdens of sickness costs can be greatly reduced through appropriate devices to distribute these costs among groups of people and over periods of time.

Such a program would be devised with these things in consideration, understanding that it might be financed from two sources, general taxation, a special tax assessment, or specific insurance contributions from the potential beneficiaries of an insurance system.

The Committee recommends consideration (*it doesn't recommend enactment of any law*) of both methods, recognizing that they may be used separately or in combination . . . Planning for a program of medical care of a magnitude to serve the entire population essentially must be approached as an objective to be fully attained only after some years of development. The role of the federal government should be principally that of giving financial and technical aid to the states in their development of sound programs through procedures largely of their own choice.

Where is the federalization in that recommendation? Where is the socialization in that declaration? It is exactly the same provision as is contained in the Constitution of the United States. It recognizes the States and the localities as the dominant factors. The medical care problems in Harlan County and Menifee County, in Woodford County and Fulton County, in Warren County and Jefferson County, are as dissimilar as the medical needs that I have and the medical needs of the man who has lost his leg. Medical care can only be determined by the local medical group, in conference with the leaders of local public opinion, and there cannot be a prescription written by Uncle Sam and filled by anybody that will answer the whole problem. It has to be answered in each county society for the benefit of the people of that county. We have already determined in Kentucky that that is our plan; we have been doing it for years; we have been improving our plan from year to year, and we are going to continue to do it from year to year and we are going to continue to win and have the approval of our people in all of this great constructive program for their welfare.

The fifth recommendation had nothing to do with medical care at all except indirectly (the psychologists and psychiatrists understand that it does have something to do with it), because it was merely a recommendation that unemployment insurance be extended so as to provide for unemployment compensation when the wage earner in the family was unemployed because of sickness, exactly as if he were unemployed because the plant shut down or because he was fired from his job or some other reason. The committee of the American Medical Association unanimously approved that section.

In doing this, the American Medical Association, and that is you and all of us together, have approved, in principle, the major recommendations of the Technical Committee on Medical Care. We have recommended modifications and economies and changes in detail in some of them. We have utterly opposed any plan of so-called compulsory health insurance as fraught with disaster, as extravagant, utterly inadequate, and expensive, as bureaucratic and political in its control, as being capable of manipulation, and as being utterly un-American and unworthy of consideration, and we stand on that issue to the last. But as far as the other recommendations are concerned, approving them in principle, we have made recommendations as to their correction in detail and have appointed a committee, of which our own Dr. Abell is Chairman, to assist in securing these corrections. This committee consists of six other members besides Dr. Abell, one of whom is Dr. Rankin. So Kentucky has two-sevenths of the membership — I don't think it is quite as much as we really deserve in numbers, but when it comes to brains, may we not claim, at least, to have the majority of the committee at that? So I don't think we need feel much anxiety about the benefits that have been derived from the considered action of this Association for the eighty-eight years of its existence, benefits, concentrated, glorified, made magnetic, and compelling by the lifetime of devotion of the man to whom this building is dedicated tonight. He, more than any other man I ever knew, realized that nothing he did was valuable because he did it: the only reason he had power was because he was your servant and because he was executing your directions and your commands, was under your supervision and was carrying on the plan and program that you had created. As his successor, my associates and myself on the State Board of Health, whom you have recommended to the Governor and whom he has selected because of your recommendations, are carrying on in that same spirit, knowing that nothing we do has authority except in so far as it is

a component part of the eternal plan for which we constantly, on our bended knees, ask for the continued revelation that we may know the best way to give ourselves completely, without a selfish thought, without a selfish ambition, that we may give ourselves utterly and completely to the service of humanity in the name of the Great Physician. To that end tonight, we are assembled here in this new home of ours, which Governor Chandler has enabled us to have. Its laboratories downstairs are as well equipped and as beautiful as any that you will find anywhere; its department of vital statistics was among the first in the United States to come into the Registration Area; in all of its departments, up on the third and fourth floors, you will find, as you go through the building, that it has been built for your service, as your home, the center into which every influence, every thought, every ambition, everything that you need and desire shall flow, and from which shall come back to you all that you desire that can possibly be given to you by our grateful Commonwealth, through the servants that it has selected under your direction.

I sat by my father on the night before he went to sleep, and many of you will recall that, on the last day of his active life, he dictated some sixty letters that were delivered after his death. That night I had come back from the West, and somehow, some way or other, there must have been in his mind a premonition that we were to be together for our last consultation. As I sat there by him, he opened his great mind and heart in the dream, in the ideals that you had created in him for the service of the people of Kentucky, and he told me of the day that would come when every citizen of the State, rich or poor, would receive adequate medical service by competent physicians, thoroughly and sincerely trying their level best to discharge their obligations as the greatest servants of humankind. He told me of the time when health departments in every county in the State would do all those things that should be done by public authority, when the medical profession of the State would do all those things that should be done by the family physician, when no child would ever have to be vaccinated by public authority because the family physician would already have vaccinated him before he was ten days old; when no child would ever have to be inoculated for diphtheria by public authority, because the family physician would already have inoculated every child by the time it was six months old and had lost the immunity it had acquired from its mother; when there would never have to be any inoculation for typhoid fever by public authority, because every physician would have inoculated every patient in the families composing his clientele, not merely those who called him, but rich and poor; and when every man would discharge fully his obligation and his duty. In that day, my friends, we will feel that we have made our contribution that the Kingdom of God may come on earth as it is in heaven. (Applause.)

CHAIRMAN HANCOCK: This concludes our program for the evening. I bid you goodnight. The meeting is adjourned.

SUPPLEMENT TO

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NOVEMBER, 1939

THE EPHRAIM McDOWELL-JANE TODD CRAWFORD MEMORIAL HOME

OF MEDICINE
NOV 27 1939
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DEDICATED MAY 20, 1939

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**COMMITTEE
ON
McDOWELL MEMORIAL**

Irvin Abell, Louisville, Chairman

C. A. Vance, Lexington

Louis Frank, Louisville

C. C. Howard, Glasgow

J. Rice Cowan, Danville

A. T. McCormack, Louisville

FOREWORD

CHRISTMAS DAY, 1809

MAY 14, 1879

MAY 20, 1939

Three momentous days in the life of Kentucky medicine, in the drama which is Kentucky's story and in the memorable achievements of mankind.

On Christmas Day, 1809, Dr. Ephraim McDowell, in the developing village of Danville, where a Commonwealth had been lately carved from the Western Wilderness, successfully removed an ovarian tumor from the abdomen of Mrs. Jane Todd Crawford, of Green County. This was the first ovariectomy and was the very beginning of scientific abdominal surgery.

On May 14, 1879, the Kentucky State Medical Association dedicated a monument to Dr. McDowell in McDowell Park in Danville to commemorate his achievements. This was the first such monument erected in the United States to a physician by grateful members of the organized profession of a State.

On May 20, 1939, the Kentucky State Medical Association, the Commonwealth of Kentucky, and the Federal Government, through the Works Progress Administration, after completion of the restoration of Dr. McDowell's home in which the operation had been performed, to the condition in which it stood on that first historic occasion, dedicated it to the memory of a hero and a heroine—Dr. Ephraim McDowell and Mrs. Jane Todd Crawford.

The story of this occasion is here recorded, to be preserved for posterity as a lasting memento of the gratitude which the people and the medical profession of Kentucky and of the United States delight to show to the memory of those who have been trail-breakers and amongst its finest servants.

In conclusion, Dr. E. P. Heller, of Kansas City, caught the spirit of the occasion and wrote, what seems to us, a prose poem, revealing the spirit of the dedication. Dr. Heller represented the Missouri State Medical Association, which is one of the Custodians.



THE FIRST OVARIOTOMY



EPHRAIM McDOWELL-JANE TODD CRAWFORD**MEMORIAL HOME****Dedicatory Services**

Auspices of the

Kentucky State Medical Association

Danville, May 20, 1939

1:30 P. M.

RADIO PROGRAM*

ANNOUNCER: *We are assembled here this afternoon for the dedication of the Ephraim McDowell-Jane Todd Crawford Memorial Home, where Dr. McDowell performed the first ovariotomy without the aid of anaesthetics, for such things were unknown in those days.*

Jane Todd Crawford traveled sixty miles on horseback in order to reach this site, where now, one hundred and thirty years later, surgeons and doctors, high in the medical profession, have gathered to dedicate this home as a permanent memorial to Dr. Ephraim McDowell, and to his patient, Mrs. Jane Todd Crawford.

It is our pleasure and privilege to present, at this time, Dr. Charles A. Vance, Chairman of the Council of the Kentucky State Medical Association, who will preside over this meeting.

DR. VANCE: The invocation will be pronounced by the Reverend Dr. W. E. Phifer, Jr., Pastor of the First Presbyterian Church, Danville.

DR. PHIFER: Eternal God, in Whom we live and move and have our being, we thank Thee that in every generation Thou dost raise up brave men and women who point the way to greater human happiness. We thank Thee especially for those of skill and attainment, who do not prostitute their gifts to that which is sordid and ugly, but who give of themselves unstintingly for the well-being of humanity. As we gather here this afternoon to pay tribute to a brilliant surgeon and a courageous woman, we pray that our hearts may be stirred within us to a fuller realization of our own possibilities of service to our fellow-men. Bless, we beseech Thee, that great company of men and women who have dedicated their lives to the lessening of human suffering. Give unto them the vision that moved the mind of this doctor whom we honor, the skill that guided his probing fingers, the wisdom which brought healing unto many. Give all of us the courage, the consecration, the beautiful faith that made this woman outstanding in her day. Be with us through these exercises of dedication, and guide our steps along all the way of our pilgrimage here. These things we ask in the name of the Great Physician, Jesus Christ, our Lord and Saviour. Amen.

DR. VANCE: The Kentucky State Medical Association has been called in general session here, at this time, by the acting President, Dr. J. Duffy Hancock, for the purpose of dedicating the restored Ephraim McDowell - Jane Todd Crawford Memorial Home. As our President, Dr. W. E. Gardner, is ill and in the hospital, Dr. J. Duffy Hancock will today represent the Association on this program with an address.

As Chairman of the Council, I have been selected to preside at this meeting. On a similar occasion in May, 1879—sixty years ago—the Kentucky State Medical Association met in Danville. Dr. Samuel D. Gross gave the dedicatory address when the McDowell monument was unveiled. This was a great address and will live forever in Kentucky Medical Annals. I am sure most of you have copies of it. Today we are assembled to dedicate this restored home of Dr. Eph-

*This program was broadcast by Allen Jackson, Station WHAS, Louisville, and the broadcast was made possible through the courtesy of the Courier-Journal and the Louisville Times.



C. A. VANCE, M.D.

ical Society of North America, and Professor of Clinical Surgery in the Medical School of the University of Louisville.

He is the 1933 recipient of the Lataere Medal and he holds honorary degrees from many colleges and universities. He is a most worthy successor of Dr. Gross, and I am sure that what he has to say to us today will be remembered as long as there are any Kentucky doctors. I have the pleasure and great honor of presenting to you Dr. Irvin Abell, of Louisville, who will give the dedicatory address.

DEDICATORY ADDRESS

DR. ABELL: It is my very great pleasure and privilege to welcome you, on behalf of the Kentucky State Medical Association, to the dedication of the Ephraim McDowell-Jane Todd Crawford Memorial Home. A grateful profession, on the fourteenth day of May in 1879, erected in McDowell Park of this city a monument to the memory of this illustrious pioneer, commemorating his epoch-making achievement in paving the way for the development of abdominal surgery. The idea of erecting the monument originated with Dr. John D. Jackson of this city and he pressed the subject upon the attention of the profession until it received consideration by the Kentucky State Medical Association and the American Medical Association. Following the death of Dr. Jackson, the project was carried through to completion by his successor, Dr. Lewis S. McMurtry. Appropriate and beautiful addresses reviewing Dr. McDowell's life and his contributions to surgery were made by Dr. Samuel D. Gross, master surgeon of the world, formerly professor of Surgery in the Medical School of the University of Louisville; by Dr. Richard O. Cowling, of the Medical School of the University of Louisville, and by Professor Lewis A. Sayre, the then President of the American Medical Association. Letters of appraisal from eminent surgeons throughout the world were read, giving forceful expression to their appreciation of Dr. McDowell. The dedication of the monument constituted the most imposing event in the annals of Kentucky Medicine, as his distinguished confreres and admiring countrymen, with bowed heads and tender words, laid immortelles upon his grave and placed his name among the great in his chosen field.

In 1929, the State of Kentucky, in choosing its two most distinguished sons as

raim McDowell, who will forever be known as the Father of Ovariectomy and whose name will be enshrined amongst the greatest in the history of Kentucky physicians. The dedicatory address today will be given by a Kentucky surgeon who stands at the top of his profession both in Kentucky and in America. He is President of the American Medical Association; Past-President of the Kentucky State Medical Association; Past-President of the Southern Surgical Association; Past-President of the Southern Medical Association; Vice-Chairman of the Board of Regents of the American College of Surgeons; Chairman of the Finance Committee and member of the Executive Committee of the American College of Surgeons; Fellow of the Southern Surgical Association; Fellow of the American Surgical Association; Fellow of the American Urological Association; Fellow of the American Gastro-Enterological Association; Fellow of the Radiolog-



IRVIN ABELL, M.D.

representatives of the State in Statutory Hall in the National Capitol at Washington, selected Dr. McDowell as one of the two. His statue was removed in 1930 to the Senate entrance in House and Senate Chambers, in which place it now reposes. Mr. Charles H. Niehaus, the sculptor, gave to the Kentucky State Medical Association the model from which the statue was made, it being housed at present in the State Capitol at Frankfort.

Dr. McDowell's granddaughter, Mrs. William McClanahan Irvine, in November, 1920 bequeathed the old homestead, Irvington, at Richmond, Kentucky, to the Kentucky State Medical Association for use as a hospital for the benefit of the people of Kentucky. Since October, 1926, it has been operated jointly, as recorded on the bronze tablets on the stone gate posts, by the Kentucky State Medical Association, the Kentucky State Board of Health, and

the United States Public Health Service as a Trachoma Hospital. Known as the Irvine-McDowell Memorial Hospital, literally thousands of the men, women and children of the Eastern Kentucky mountains have sought and found relief through its kindly ministrations, perpetuating the memory and spirit of service of him in whose honor it was founded. It contains many valuable mementoes of Dr. McDowell, which, by the will of Mrs. Irvine, remain in the Irvine-McDowell Hospital under penalty of forfeiture of the property upon their removal.

On May 30, 1935, the Kentucky State Medical Association dedicated in McDowell Park a monument erected to the memory of Jane Todd Crawford, Kentucky's pioneer woman who met the vicissitudes of life with courage and fortitude and who endured the exquisite agony of the first experimental ovariectomy without the aid of the blissful insensibility of anaesthesia, supported by an unshakable faith in God, her substitute for anaesthesia being the recital of selections from the Psalms. By this token, the suggestion made by Professor Lewis A. Sayre at the dedication of the McDowell monument in 1879 has at last been fulfilled, namely, that the name of Jane Todd Crawford with that of Dr. Ephraim McDowell pass down in history as the founders of ovariectomy. This action of the Kentucky State Medical Association constitutes a landmark in the history of the medical profession, in that this memorial is, so far as we have been able to ascertain, the first concrete recognition ever given a patient by the profession.

The Kentucky State Medical Association has long cherished the desire to acquire the McDowell home and to restore it to something of its original state and furnishings, that it may be a repository for the relics and mementoes of Dr. McDowell and his great contribution to the betterment of human welfare. With the realization of this dream, the McDowell saga is complete, the chief events, in their chronological order, being as follows:

Dr. McDowell's entry upon the practice of his profession in Danville in 1795.

Dr. McDowell's reception of the diploma of the Medical Society of Philadelphia in 1807.

The performance of the first ovariectomy by Dr. McDowell, Christmas Day, 1809.

The publication of Dr. McDowell's first report in the October, 1817, issue of the Eclectic Refertory and Analytical Review, Philadelphia (one of the two jour-



Corner of McDowell Park, Danville, Showing Jane Todd Crawford Memorial and Ephraim McDowell Monument

nals published in the country at that time) and facsimile of which was reproduced in the Kentucky Medical Journal, January, 1933, page seven, under the title, "Three Cases of Exterpation of Diseased Ovaries."

The publication in October, 1819, of two additional cases in the same journal, the two papers being the only writings extant of this illustrious pioneer.

The conferring of the honorary degree of Doctor of Medicine upon Dr. McDowell by the University of Maryland in 1823.

Dr. McDowell's death in June, 1830.

Dr. Samuel D. Gross' exhaustive "A History of Surgery in Kentucky," published in 1852, in which he established the fact that Dr. McDowell was the Father of Ovariectomy.

Dedication of the McDowell monument in McDowell Park by the Kentucky State Medical Association in 1879.

Publication in 1921 of "Father of Ovariectomy and Founder of Abdominal Surgery," with an appendix on Jane Todd Crawford, by Dr. August Schachner, a member of the Kentucky State Medical Association, in which the antecedents, the life and the accomplishments of Dr. McDowell are minutely reviewed and the identity of Mrs. Jane Todd Crawford fully established.

The establishment of the Irvine-McDowell Trachoma Hospital in Richmond, Kentucky, in October, 1926.

The installation of the statue of Dr. McDowell in Statuary Hall in the National Capitol by the State of Kentucky in March, 1929.

The dedication of the model of the McDowell Statue in the rotunda of the Kentucky State Capitol on November 15, 1930.

The dedication of a monument to Jane Todd Crawford by the Kentucky State Medical Association in May, 1935.

The dedication of the Ephraim McDowell-Jane Todd Crawford Memorial Home, May 20, 1939.

It is but fitting, at this point, to express the thanks and gratitude of the Kentucky State Medical Association to those whose generosity has made possible the purchase and restoration of the property. It is interesting to note that, with the exception of one short period, the house, since the death of Dr. McDowell, has been in the possession of doctors or their heirs. Pursuant to instructions from the House of Delegates of the Kentucky State Medical Association, the Ephraim McDowell Memorial Committee, consisting of Drs. Louis Frank, Charles A. Vance, Marshall McDowell, A. T. McCormack, and Irvin Abell, on November 22, 1935, purchased the property from Miss Emma Weisiger and her sister, Mrs. L. W. Harding, daughters of the late Dr. Joseph Weisiger, for the sum of fifteen thousand dollars, they generously donating five thousand dollars of the purchase price in memory of their father. The title to the property was vested in the Kentucky State Medical Association, which in turn conveyed it, November 24, 1935, to the State Park Commission in the name of the Division of Public Properties. The ownership of the property by the State permitted us to secure money from the Works Progress Administration for its restoration and, at the same time, assured perpetuity of its care. In 1936, Drs. J. R. Cowan and C. C. Howard were added to the Memorial Committee; the committee vacancy occasioned by the death of Dr. Marshall McDowell in 1938 was filled by the appointment of Dr. P. C. Sanders. The Committee desires expressly to thank the members of the Kentucky State Medical Association, the Southern Surgical Association, the American College of Surgeons and the American Medical Association for their liberal contributions, covering in total the cost of the property. We are under a debt of gratitude to the Division of Parks of Kentucky and the Works Progress Administration for the restoration of the McDowell Home. "The restoration problem was not to remodel or reproduce, but to try to re-create the medical establishment and home in such a way as to capture as much as possible of the spirit of the place as it must have been in his time, both by careful preservation of all sound materials and by honest analysis of what could not be readily observed; to restore it to life and health and the magnetism it must have had in its most interesting days; to make it



**Cambus Kenneth, Last Home of Dr. Ephraim McDowell
Two Miles East of Danville.**

seem to those entering that Dr. McDowell had perhaps just stepped across the street and would return any moment."

In the opinion of the Committee, this objective has been fully realized. Mr. Donald Corley, housing architect of the Works Progress Administration, rendered invaluable assistance in the formative stage of the undertaking, accumulating a library of all publications concerning Dr. McDowell and his work and listing the property in the national historic homes of the United States. He approached the undertaking not only as an architect, but as one deeply imbued with the value of Dr. McDowell's contribution to the welfare of mankind and of the human interest attached thereto. Mr. C. Julian Oberwarth, the architect in charge of the actual work of restoral, has been most faithful and efficient, giving unstintedly of his personal service in seeing that restorations and replacements were in harmony with the period of construction of the house. When the program for the acquisition and restoration of the home was started, Mrs. Emma Guy Cromwell held the office of Director of State Parks; her advice and influence were of definite help during the formative period. She was succeeded in office by General Bailey P. Wooton, as Custodian of State Property, whose interest and aid have been untiring and whose cooperation and sympathetic support have made the completion of the project possible. Finally, we desire to express our profound gratitude to the Philadelphia College of Physicians and the Philadelphia Academy of Surgery for their kindness in returning the original knocker on the door of Dr. McDowell's home. After the delivery of the dedicatory address by Dr. Samuel D. Gross in 1879, Dr. Richard O. Cowling in eloquent terms presented to Dr. Gross the McDowell knocker in the course of which he said: "No one knows better than you how good and how great was the man of whom it speaks. It will tell of many summons upon mercy's mission which did not sound in vain. Ofttimes has it roused to action one whose deeds have filled the world with fame. A sentinel it stood at the doorway of a happy and an honorable home, whose master, as he had bravely answered its signals to duty here below, when the great summons came, as trustfully answered that and laid down a stainless life."

In acknowledgement, Dr. Gross said in part: "I take this emblem now offered me as the most valued gift of my life. It shall be received into my home as a household god, environed by all the memories of goodness and greatness to which your speaker has referred and, above all, recalling this scene. Dying, I shall bequeath it, among my most important possessions, to the family that I may leave, or in failure of that, to be presented to the archives of some society."

Dr. Gross left the knocker to the Philadelphia Academy of Surgery and the Philadelphia College of Physicians and, upon being approached with a request for its return to its original home, the presidents of these two organizations replied as follows:

My dear Doctor Abell: The College of Physicians of Philadelphia has received your request for the transfer to your Society of the door knocker to the house of Ephraim McDowell that was presented to Dr. Gross and by him deposited in our care. It is understood that your request is for the purpose of completing the restoration of Ephraim McDowell's house as a Memorial. The Council of the College found itself sympathetic with your request. It took into consultation in this matter the Philadelphia Academy of Surgery, an organization in which Dr. Gross was deeply interested and which, it appears, he intended should receive the McDowell knocker. This Academy also found itself sympathetic with your request. Acting upon the decision of these two bodies, the door knocker to the original house of Dr. McDowell is herewith transferred to your Society to aid in the restoration. It is felt that it would make a proper addition to your Foundation for the memory of this surgeon and that very probably Dr. Gross would be glad to see it in its former place. The history of this knocker starts with an episode described by Dr. Gross in his autobiography, pages 74 and 75; the description can be paraphrased as follows:

Dr. Gross was invited in February, 1879, to deliver on May fourteenth, the public address at the dedication of the monument erected at Danville, Ky., by the Kentucky State Medical Society in honor of Dr. Ephraim McDowell. He gladly

accepted, as he had been mainly instrumental in placing Dr. McDowell's name upon a fixed and prominent basis. Immediately after his address, his former pupil, Dr. Richard O. Cowling, presented to Dr. Gross, on behalf of the Kentucky State Medical Society, the McDowell door knocker. In responding to this gift, Dr. Gross said: "This gift is now in my possession and I intend to give it ere long to the Philadelphia Academy of Surgery."

The College of Physicians maintains a room in which the library of Dr. Gross, his portrait of his son, and other memorabilia are preserved. The McDowell door knocker has hung there since the establishment of this room. It is the intention of the College of Physicians to have a photograph made of the door knocker, to frame it and hang it in the accustomed place of the original piece. This gift was apparently designed for the Academy of Surgery, by which body it was placed in the charge of the College of Physicians, where it has been maintained and displayed for fifty-eight years. The College and the Academy would be very glad to see the knocker's history attached to it in its display in the memorial building. The College of Physicians and the Academy of Surgery send congratulations to the Kentucky State Medical Society upon their ability to reclaim and restore the dwelling of Dr. McDowell and they express the hope that it will remain forever as a tribute to and a stimulant from that bold, yet thoughtful surgeon, who laid the foundation for the development of so important a branch of our calling.

Yours very Truly,

Damon B. Pfeiffer, *M.D.*
President, College of Physicians.

George F. Muller,
President, Philadelphia Academy of Surgery

The City Council of Danville granted permission, as a special privilege, for the construction of a brick sidewalk to carry out the plans and reconstruction of the home and its surroundings as near the original as possible. The construction and lumber of the old home were of the best and have withstood the ravages of time for nearly a century and a half. It was one of the fine mansions of the day; it still retains its dignity of aspect somewhat impaired by the encroaching advance of the city and by the architectural taste of a later day. Regardless of the excellence or the character of its architecture, it remains for us a glorious mansion within whose hallowed walls was staged a drama, which for us became a heritage and which, during the passing years, has brought forth abundantly, rightfully taking its place with the contributions of those benefactors of mankind who have done more for the happiness, the satisfaction and the working power of the human race than those of any other group of men in any field of activity who have ever come into the world, from ancient Greece to our own day. When one considers the countless thousands of human beings benefited by abdominal surgery, to the attainment of which Dr. McDowell's exploit pointed the way, the beautiful tribute paid by Dr. David Yandell during the closing years of the past century takes on an added significance. In contrasting the fame of the statesmen, the orators, and the military men of Kentucky he said: "Chief among all these is he who bears the mark of our guild, Ephraim McDowell. For the labors of the statesman will give way to the pitiless logic of events, the voice of the orator grows faint in the coming ages, and the deeds of the soldier find place only in the library of the student of military campaigns; while the achievement of the village surgeon, like the widening waves of the inviolate sea, shall reach the uttermost shores of time, hailed by all civilization as having lessened the suffering and lengthened the span of human life."

It has been truly said that "No one age has ever witnessed the birth and the maturity of any branch of human knowledge." Dr. McDowell and Mrs. Crawford launched upon its career a lusty infant which, through the years, has grown into a magnificent, virile manhood. Little did Dr. McDowell appreciate its possibilities of development, while many of his contemporaries ridiculed the idea of its usefulness. "Seven cities claim Homer dead, through whose streets the living Homer begged his bread." Today, all proclaim it to be a superb hero, paying grateful homage and admiration, whilst fondly recounting

its struggle from obscurity to the pinnacle of fame. The eyes of the medical world have long turned toward Danville and the McDowell home as the magic fountain from which sprang the current of the surgical thought which, coursing through the years, has permeated the field of medical practice the world over, to the everlasting benefit of mankind.

As we view the home as it existed in 1809, we look in vain for the various factors which today make for the safety of surgery. There is no operating room, with its highly specialized technical equipment and trained personnel; no supply of anaesthetics; no laboratory for the determination of changes in body fluids or instruments of precision for the estimation of body function and reserve; no sterilizing apparatus, none of the means of preoperative preparation and of postoperative care now considered essential—all constituting adjuncts and aids to the mental endowment of the surgeon who directs their employment. History and tradition tell us that Dr. McDowell, in lieu of these aids, possessed a compensatory acumen in correctly assessing the value of symptoms, an uncanny insight and that most important attribute of the surgeon, surgical judgment. He was noted for his ingenuity, his independence of thought and enthusiasm of purpose, combined with discernment to perceive, courage to undertake and patience to carry through. A modest and unassuming man, with a consciousness of right, unsupported and alone, in defiance of professional obloquy, he performed operation after operation with astonishing success and saved from the grave the victims of a disease until then acknowledged to be incurable. Danville, the first capital of Kentucky, with the McDowell home almost under the shadow of the State buildings, had but 432 inhabitants when he operated on Mrs. Crawford, and but 804 at the time of his death. The environment by which he was surrounded, including the lack of hospitals, trained nurses, anaesthetics, modern surgical appliances, knowledge of surgical cleanliness and other inherent and almost inconceivable difficulties, explains the incredulity of his contemporaries and make his achievements seem almost miraculous. Mrs. Crawford was a woman of intrepidity and fearlessness, capable of weighing in the balance the chances of life and death, and, having done so, abided with Christian resignation the result of her choice. Confidence, reverence, respect and a deep religious conviction rounded out a character well suited to meet the vicissitudes of frontier life and to submitting to the unknown in an effort to be rid of her tumor. Both Dr. McDowell and Mrs. Crawford reposed faith in Divine Providence and, as true children, solicited His aid in prayer. As previously stated, Mrs. Crawford recited selections from the Psalms during the operation; on the fly leaf of a prayerbook Dr. McDowell inscribed in his handwriting the following prayer: "Almighty God, be with me, I humbly beseech Thee, in this attendance in Thy holy house; give me a becoming sense of Thy presence and grant me Thy direction and aid that in confession I may be humbled and truly penitent; in prayer, serious and devout; in praise, grateful and sincere; and in hearing Thy word, attentive and willing and desirous to be instructed; give me true faith in the atonement of Thy Son as alone sufficient to procure Thy favor and blessings; that worshipping Thee in spirit and in truth, my service may be accepted through His all-sufficient merit. Amen." Both of the actors in this historic epic possessed the qualities of simplicity, of faith, of determination, and of greatness, which attained full fruition in the crucible of frontier experience. They demonstrated that the price of success demands the use of all of one's courage to force oneself to concentrate on the problem in hand, to think of it deeply, devoutly and constantly; to study it from all angles and to plan; to have a high and sustained determination to put over what one plans to accomplish, not if circumstances be favorable to its accomplishment, but in spite of adverse circumstances which may arise. And it may be said in passing that nothing worth while has ever been accomplished without some obstacles having been overcome. Both possessed vision, courage and insight in giving to society that which has proved one of its greatest boons. The best life in the generations and nations that are gone still lives in our civilization, proving conclusively that society advances



SCENES AT DEDICATORY SERVICES

only in proportion as it receives the enduring service of the best. Dr. McDowell's service, in conjunction with that of the other immortals in the surgical and scientific world, has made it possible today for the surgeons of the United States and Canada to perform annually between two and one-half and three million operations with a mortality approximating four per cent. Surgical operations in the days of Dr. McDowell were largely emergencies or undertaken for conditions which, without treatment, were known to result fatally. He was a profound thinker, a brilliant operator, and for years was almost the sole occupant of the field of surgery in the West. All the important operations that were required for hundreds of miles around were performed, for a number of years, exclusively by him. His contributions to literature were few, consequently there is no accurate knowledge at hand as to the extent and range of his surgical activities. It is known that he operated successfully for bladder stone thirty-two times and that he paid much attention to hernia, frequently relieving strangulation by operation. His epoch-making ovariectomy was performed in December, 1809, fourteen years after his entry into practice, between which time and his death in 1830 he is known to have operated upon thirteen patients for the relief of ovarian tumors, with eight cures, four deaths and one failure, in the latter instance the operation being abandoned on account of adhesions. Dr. McDowell made but two reports upon this phase of his work, one in 1816, covering three cases, and one in 1819, covering two additional ones. Both were brief and, judged by our standards of today, were incomplete. In defending himself against some of the criticisms heaped upon him, he wrote:

I thought my statement sufficiently explicit to warrant any surgeon performing the operation, when necessary, without hazarding the odium of making an experiment, and I think my description of the mode of operation, and of the anatomy of the parts concerned, clear enough to enable any good anatomist, possessing the judgment requisite for a surgeon, to operate with safety. I hope no operator of any other description may ever attempt it. It is my most ardent wish that this operation may remain to the mechanical surgeon, ever incomprehensible. Such have been the bane of the science, intruding themselves into the ranks of the profession, with no other qualifications than a boldness in undertaking, in ignorance of their responsibility, and indifference to the lives of their patients; proceeding according to the special dictates of some author, as mechanical as themselves, they cut and tear with fearless indifference, incapable of exercising any judgment of their own in cases of emergency, and sometimes without possessing the slightest knowledge of the anatomy of the parts concerned. The preposterous and impious attempts of such pretenders can seldom fail to prove destructive to their patients, and disgraceful to the science. It is by such the noble science has been degraded in the minds of many, to the rank of an art.

This indictment of incompetence holds equally as true today as then; the safety of modern surgery embraces many factors; the training, ability and integrity of the surgeon, well equipped and administered hospitals, trained nursing, proper study of the patient to know not only that he needs an operation, but of equal importance to learn that he can stand an operation, appropriate preoperative and postoperative care, all of which, when properly correlated, have done much to reduce risk and bring hope and encouragement to the many seeking restoration of health through its services. We have inherited the fruits of the work of Dr. McDowell, his contemporaries and successors; it is our obligation, as we inherit that torch of truth, to keep it burning, brighter and purer and freer, and safely transfer it to the outstretched hands of the coming generation.

DR. VANCE: It is well known by all Kentucky doctors that our present Governor has been interested in every way in the betterment of the wards of the State. He has shown this in his rehabilitation program of the State Hospitals and other institutions. He has frequently requested the Kentucky State Medical Association to advise and assist him in all this work and he has cooperated with the Association in every particular. When his program is completed the institutions of the State of Kentucky will be second to none in the United States. I am one of those who can testify to his fine qualities and cheery disposition

since he entered the freshman year at Transylvania with \$5.00 and a red sweater. I am sure he had the red sweater, but I do not know whether he had the \$5.00 or not. I have the pleasure and the great honor of presenting to you, Honorable Albert B. Chandler, Governor of Kentucky, who will accept this memorial for the State.

ADDRESS OF ACCEPTANCE

GOVERNOR CHANDLER: Dr. Vance, Dr. Abell, members of the medical profession of Kentucky and of other medical groups throughout the country who are assembled with us, and my fellow citizens:

It is my happy privilege and pleasure on this occasion to accept, on behalf of the people of Kentucky, this memorial to Dr. Ephraim McDowell and Jane Todd Crawford.

As we stand here at Danville today, in view of the home of that famous doctor, we must remember that Jane Todd Crawford, ill though she was, traveled sixty miles on horseback from her home near Greensburg, through a wilderness trail in the dead of winter, to reach this spot, in order that she might undergo an operation that no doctor had ever before undertaken to perform. She did not know whether she would live after the operation or not, but Dr. McDowell had told her what was involved and that he believed it would be a success, and she understood that this was an experiment for the relief of her suffering. Through her fortitude and faith and Dr. McDowell's skill, the operation was performed in this very home which we now dedicate as a lasting shrine. Jane Todd Crawford did survive and lived thirty-two years after that, outliving, by twelve years, Dr. McDowell, who died at the age of fifty-nine.

As a result of this historic operation, Dr. McDowell became the special benefactor of all womankind, for he not only relieved his patient of a very painful and hopeless condition, but paved the way for doctors after him to carry on.

The memory of the integrity and scientific knowledge of such men as Dr. McDowell and of the faith and courage of such women as Jane Todd Crawford encourages us to emulate their example and strive to be of service to humankind. We are fortunate, indeed, that there are living in this land of ours, a distinguished group of the descendants and successors of Dr. McDowell, who, because of their belief and faith in their forefathers, will make equally great, if not so spectacular contributions to the service of humanity, through their daily work.

It is my pleasure, Dr. Abell, to thank you, as President of the American Medical Association, and to thank Dr. McCormack and all the other doctors, here and everywhere, for Dr. McDowell, and all those other physicians who have made Kentucky and this great country of ours, healthier because of their efforts and who are protecting the health of our people. Last year, Kentuckians enjoyed the greatest measure of health



HON. ALBERT B. CHANDLER

we have ever had; our death rate was the lowest in years and our people were healthier than ever before because of the ministrations of our medical men in eradicating pain and misery and disease, and of their efforts in protecting the health of our people. I want to say to you that we are grateful to our doctors and are determined to stand by them. I believe I can assure you that the people of Kentucky will always leave the solution of the important problems of public health and medical service to the Kentucky State Medical Association.

On behalf of the people of Kentucky, I accept this home in the memory of that great doctor and that hardy woman, pioneers both, who played the principal roles in that historic drama which meant the life of the one, and the reputation of the other, in the hope that others who come after may be as determined to protect the lives and the happiness of our people. That the Kentucky State Medical Association has presented this shrine to the Commonwealth is a demonstration that it intends to preserve intact the fine ideals and high traditions of those who have made Kentucky a center of medical education and medical service.

May God be with you in the solution of those problems of public health and medical service that are of first importance to the people of this great Commonwealth of Kentucky.

DR. VANCE: Since its organization in 1888 the Southern Surgical Association has been interested in the achievements of Dr. Ephraim McDowell and in the restoration of this home. Many of its Fellows have made pilgrimages to the home and many have contributed to its restoration. For many years the Southern Surgical McDowell Committee has helped the Kentucky State Medical Association Committee in every way possible; therefore, it is entirely fitting and proper that the Southern Surgical Association should be represented on this program. In passing, it should be noted that this is almost a Southern Surgical Association program. Each of the physicians presenting addresses and the chairman are Fellows of the Southern Surgical Association, and Dr. A. T. McCormack was formerly a Fellow of the Association. It is especially fitting that among the Fellows of the Southern Surgical Association is a great, great grandson of Dr. Ephraim McDowell. He is an eminent surgeon in his own right. He is a Fellow of the American College of Surgeons; Fellow of the Southern Surgical Association; Fellow of the Western Surgical Association; Fellow of the American Association of Anatomists. I have the pleasure and great honor of presenting Dr. E. V. Mastin, of St. Louis, Missouri, who will address us, representing the Southern Surgical Association.

ADDRESS

DR. MASTIN: It is a great privilege and pleasure to be present at the dedication of the home of my great, great grandfather, Ephraim McDowell. I have read with great interest, the biographical sketch of Dr. McDowell, written by Dr. John D. Jackson, and I am greatly indebted to him for the material I needed.

Dr. McDowell's thorough training for his profession, his constant study of contemporaneous work, his diagnostic ability and good judgment have impressed all who have studied his career.

He returned to Danville, after finishing his education at the world famous medical school of Edinburgh, Scotland, and soon became the outstanding surgeon west of the Alleghanies. His fame spread to neighboring States and it was not long before he had an enormous practice. Since there were neither turnpikes nor railroads in those days, he often had to travel more than a hundred miles, on horseback, to reach those whose afflictions were of such a nature that they were unable to come to Danville for consultation. We are told that he was truly a general surgeon, for he performed all of the various operations that were, at that time, known to science. He was particularly successful in his operations for strangulated hernia, and for the removal of stone in the bladder. In fact, prior to 1828, he had performed lithotomy twenty-two times without a single death. He extirpated the parotid gland for tumor, many years before it was attempted by McClellan or any other American surgeon.



E. V. MASTIN, M.D.

About one hundred and thirty years ago, in the winter of 1809, Dr. McDowell was called to see Mrs. Crawford in Green County, Kentucky, some sixty miles from Danville, who was thought by her doctor to have gone long past her time in pregnancy, or to have an abdominal pregnancy. After completing his examination, Dr. McDowell stated that her condition was due to a rapidly growing ovarian tumor. He explained the gravity of the condition to Mrs. Crawford, and advised her to have the growth surgically removed. He told her that he had never performed the operation, but that he was willing to risk his reputation upon this issue, if she would submit to the experiment, adding that it was well worthy of a trial. Mrs. Crawford, a woman of marvelous heroism and fortitude, decided to submit to the operation and thus become the first woman ever to have had an ovarian cyst removed. The operation was highly successful, and she lived for thirty-one years, dying at the age of 78.

Dr. McDowell's modesty and indifference to fame add to his true greatness of soul. Although his success in Mrs. Crawford's case had been everything that could be desired, it was not until seven years afterwards, when he had twice repeated the operation, that he wrote the description of his ovariectomies, and then only to please his former teacher, John Bell of Edinburgh, who first suggested to him the possibility of success following the removal of a diseased ovary.

The brevity and rather casual manner in which Dr. McDowell reported his cases exposed him to criticism, and some of his reviewers were rather sarcastic, and even had the audacity to doubt the veracity of his statements. A few years later, however, when the accuracy of his report had been fully established, one of his English critics, Dr. James Johnson, Editor of the London Medical and Surgical Review, published an apology for his unjust criticism of Dr. McDowell.

In 1819, Dr. McDowell reported two more ovariectomies and, in this connection, he alluded to his critics and their criticism of his report as follows:

I thought my statement sufficiently explicit to warrant any surgeon's performing the operation when necessary without hazarding the odium of making an experiment; and I think my description of the mode of operating, and of the anatomy of the parts concerned, clear enough to enable any good anatomist possessing the judgment requisite for a surgeon to operate with safety. I hope no operator of any other description may ever attempt it. It is my most ardent wish that this operation may remain, to the mechanical surgeon, forever incomprehensible. Such have been the bane of the science, intruding themselves into the ranks of the profession with no other qualification but boldness in undertaking, ignorance of their responsibility and indifference to the lives of their patients; proceeding according to the dictates of some author as mechanical as themselves, they cut and tear with fearless indifference, utterly incapable of exercising any judgment of their own in cases of emergency and sometimes without possessing even the slightest knowledge of the anatomy of the parts concerned. The preposterous and impious attempts of such pretenders can seldom fail to prove destructive to the patient and disgraceful to the science. It is by such this noble science has been degraded in the minds of many to the rank of an art.

Dr. McDowell was an excellent surgeon and intensely conscientious, and the welfare of his patients always came first. He studied their histories carefully and always made sure that the operation contemplated was definitely indicated. He considered the profession of medicine as a high and holy office and physicians as ministering angels, whose duty it is to relieve suffering and to glorify God. He had a warm and loving heart and was in full sympathy with his fellow man, and was particularly kind to the poor and needy. He was a loyal and devoted husband, a tender and loving father, and an honest and high-toned citizen. In short, he was the Master Surgeon.

DR. VANCE: You will recall that after Dr. Gross had delivered his dedicatory address for the Kentucky State Medical Society here in Danville in 1879, he was presented with the McDowell Home door knocker by Dr. Richard O. Cowling, of Louisville. In the presentation, Dr. Cowling stated that the door knocker belonged by right to Dr. Gross; whether we agree with that statement or not, that is what he said. This door knocker passed through various resting places to the keeping of the College of Physicians of Philadelphia. When this fine body of gentlemen heard that the Ephraim McDowell Home was being restored, they sent the door knocker back to the Kentucky State Medical Association, with the request that it be placed where it came from—on the front door of the McDowell Home, and said, in effect, "It belongs by right to you, McDowell Home!"

Dr. George P. Muller, who is President of the College of Physicians of Philadelphia, had planned to be with us today and present the door knocker, but he could not be present. In his place was selected a nationally known Kentucky physician, who has represented the State in many of the National Councils. He is President-Elect of the Southern Medical Association and Past-President of the American Public Health Association. He has held the offices of Secretary of the Kentucky State Board of Health and Secretary of the State Medical Association for a great many years and is at present the State Health Commissioner of Kentucky. It is a pleasure and a great honor to present to you Dr. A. T. McCormack, of Louisville, who needs no introduction to this or any Kentucky audience. He will address us and present the McDowell Home door knocker on the behalf of the College of Physicians of Philadelphia.

ADDRESS

DR. MCCORMACK: Dr. Vance, Dr. Abell, Governor Chandler and friends: On this historic occasion, it is a great privilege to represent the College of Surgeons of Philadelphia and the Philadelphia Academy of Surgery, two of the oldest scientific bodies in America.

As Dr. Abell has told you, this priceless memento of Dr. McDowell was presented to the elder Gross by Dr. Richard Cowling, at the conclusion of the dedication of the monument to Dr. McDowell erected by the Kentucky State Medical Association in 1879. It became the property of the younger Gross and of Dr. Osler, who married his widow, and, through them, passed to the possession of these two organizations which have been its honored custodians since. It held the place of honor in the great hall of the College of Surgeons of Philadelphia and has now been restored to us, to be presented to the Commonwealth of Kentucky.

It becomes my privilege to unlock the case in which it lies, and to present it to the Governor of the Commonwealth of Kentucky. (Withdraws the knocker from the case and taps.) That is the sound by which those who desired the services of that great physician, gave him notice; I hope that its music will forever bring to our minds the reverence we feel today for this pioneer surgeon. May we all always recall that it was with this music (taps) that Jane Todd Crawford informed the surgeon that their great moment had arrived. May this music (taps) inspire every physician and every patient to emulate their great example and so increase the health and happiness and efficiency of the people of Kentucky and of the world.



THE ORIGINAL McDOWELL HOME KNOCKER



A. T. McCORMACK, M.D.

and arousing notes of the knocker which Mrs. Crawford and hundreds of others used when they called the great surgeon to their service. These sounds called Dr. McDowell to opportunity for service and to fame. Let us accept this as symbolic of the opportunity that is knocking at the door of the Commonwealth in this increasingly complicated civilization today, and let us be inspired by its restoration to respond with the best we have in the service of our people and of the country.

DR. VANCE: Since the Kentucky State Medical Association was called to order by its first President, Dr. W. L. Sutton, in Frankfort in 1851, its membership has contained all of the great names in Kentucky Medical history, and many of its members have held positions of honor in both the sectional and national associations. Dr. Samuel D. Gross, who was the fourth president of the Kentucky State Medical Association, resurrected Dr. McDowell's report of his cases of ovariectomy and presented his well known Report of Kentucky Surgery to the Kentucky State Medical Association in 1852. After this paper was published in American Medical Biography in 1861, Dr. John D. Jackson, of Danville, wrote and published a Biographical Sketch of Dr. Ephraim McDowell. After his death in 1875, this work was carried on by Dr. Lewis S. McMurtry who, at that time, lived in Danville. He raised the money from subscriptions to provide the granite shaft which now marks McDowell's grave in the McDowell Square here in Danville, and he was largely instrumental in having the dedication at the meeting of the Kentucky State Medical Association in Danville in 1879. Since then the doctors in Danville and out in Kentucky have made various attempts to purchase and restore the McDowell Home. This was made possible

Governor Chandler, in presenting, as spokesman for the medical profession of Kentucky, to you and to the Commonwealth of Kentucky this historic knocker, we desire by this token to rededicate ourselves to the service of humanity and to pledge ourselves to continue to do all that is humanly possible to prevent, cure, or ameliorate disease amongst our people.

GOVERNOR CHANDLER: Dr. McCormack, I am very happy that the College of Physicians of Philadelphia and the Philadelphia Academy of Surgery have selected you as their representative through whom this fine emblem is returned to its home. I am sure all those in this throng and all those in the radio audience were moved, as I was, when we listened to the staccato

by the Weisiger heirs, who owned the property and who presented \$5,000.00 towards its purchase price as a memorial to their father and grandfather, who were practicing physicians in Frankfort and Danville, respectively. The balance of the money was advanced by the House of Delegates of the Kentucky State Medical Association at its Louisville meeting in 1935. This money was repaid to the State Medical Association with contributions from physicians all over the country. The restoration was done by a grant from the Works Progress Administration, under the direction of architects—first, Mr. Donald Corley, and later, Mr. Julian Oberwarth. It is to the latter that we owe great thanks for his untiring interest and skill in his profession. So, you see that the Kentucky State Medical Association should have a representative on the program today.

Our acting president has been greatly interested in the restoration, as he has also been in all the activities of the Kentucky State Medical Association. He is a Fellow of the American College of Surgeons; Fellow of the Southern Surgical Association; Fellow of the American Medical Association; Assistant Clinical Professor of Surgery in the Medical Department of the University of Louisville. He will address us today as the representative of the Kentucky State Medical Association. I have pleasure and great honor in presenting to you Dr. J. Duffy Hancock.

ADDRESS

DR. HANCOCK: Mr. Chairman, Governor Chandler, Distinguished Visitors, Ladies and Gentlemen: The pleasure of representing the Kentucky State Medical Association today is somewhat dimmed by my appreciation of the fact that I am here in this capacity because of the illness of our distinguished President and beloved friend, Dr. W. E. Gardner. I am sure that all of you will rejoice with me to learn that he is making a splendid recovery and extends to you his hearty greetings.

Kentucky has contributed many epoch-making years to the history of our nation. None stands out more vividly than 1809. In February of that year, Abraham Lincoln was born near Hodgenville. It is neither necessary nor appropriate to discuss his remarkable career at this time. On Christmas Day of the same year, at this exact location here in Danville, not ovariectomy alone, but modern surgery of the closed cavities of the body had its birth. The author of that birth was Dr. Ephraim McDowell.

Others have and will describe his illustrious life. Let us now consider rather what his operation upon Mrs. Jane Todd Crawford means to the surgery of today. Surgical procedures have been known and practiced since the dawn of history. Before 1809, McDowell himself had performed trephining lithotomy, tracheotomy, herniotomy, amputations, etc., but to none of them did he have the slightest claims of priority. Other physicians had even aspirated fluid accumulations within the abdominal cavity. McDowell's contribution was the deliberate and intentional opening of the peritoneal cavity for the removal of a diseased organ. This act was an original, carefully conceived attack by a well-trained surgeon.

Instead of attributing the advances in modern surgery to the introduction of anaesthesia and asepsis, let us of today acknowledge the fact that McDowell's operation made anaesthesia and asepsis necessary; when he showed *what* could be done, it was inevitable that those aids to its accomplishment would be developed. Anaesthesia and asepsis would be hollow, limited terms, if exploration of the abdominal and thoracic cavities was not available to offer opportunities for their use.

Kentucky has had more than her share of eminent surgeons. A few of them have made original observations. Most of them, and of their colleagues elsewhere, have but perfected the technique begun on this historical site. Their every professional act is an indirect tribute to McDowell's skill; everyone of us acquiring abdominal and thoracic surgery is a direct beneficiary of his heritage. His skill was not that of a cold, mechanical type, and he expressly hoped that his operation would never be understood by those who worked in such a fashion. His skill was rather that of mature judgment, based upon sound fundamental training and professional honesty. He well



J. DUFFY HANCOCK, M.D.

exemplified the surgeon, as contrasted to the operator. The changing phases through which surgery has passed have been described as the heroic, the anatomical, the pathological, and the modern physiological era. No one has contributed more to this development than Ephraim McDowell.

Let surgeon and layman join today in giving "Honor to whom honor is due."

DR. VANCE: The site of the present Trinity Episcopal Church here in Danville was a contribution from Dr. McDowell and he was a member and vestryman of that church at his death; therefore, it is fitting that I request that the benediction be pronounced by Rev. Dr. Franklin, Rector of Trinity Church.

DR. DAVIS: Unto God's gracious mercy and protection, we commit you. The Lord bless you and keep you; the Lord make His face to shine upon you and be gracious unto you; the Lord lift up His countenance upon you and give you peace, both now and evermore. Amen.

At the conclusion of the dedicatory services, which were held outdoors, the meeting was adjourned to the Ephraim McDowell-Jane Todd Crawford Home for presentation of the Arch Barkley Memorial Gifts and for the unveiling of the Weisiger Memorial Tablet.

Presentation of the Arch Barkley Memorial Gifts

DR. VANCE: The program will now be resumed with an address by Dr. Louis Frank, Louisville, Past-President of the Kentucky State Medical Association, who will present the Arch Barkley Memorial Gifts.

ADDRESS

DR. FRANK: Mr. Chairman, Commissioner Wooton, Ladies and Gentlemen: I feel highly honored by being asked, in behalf of Mrs. Barkley and her daughter, to restore these valuable instruments to the house in which they originally belonged and in the activities of which they played no unimportant part. In so doing, I wish to express my deep sorrow for the early demise of Dr. Arch Barkley, who had intended personally to return these hallowed mementoes to this shrine which we have today dedicated. Mrs. Barkley, in making these gifts to the McDowell Memorial, has requested me to say a few words concerning them and some additional memorabilia. The donations consist of a set of instruments, of McDowell's scales and spatula and of a copy of a biography of him by his granddaughter, Mrs. Ridenbaugh.

These instruments, in their original case, were used by the great surgeon in performing his operations for stone in the bladder. Many persons, among them quite a number of doctors, are not aware that Dr. McDowell, even before his historic ovarian operation, was a surgeon of note, performing all types of operations of the period and so was well prepared by his previous work and experience for the experiment, as he termed it, which he undertook upon Jane Todd Crawford.



**Dr. Louis Frank Exhibits Arch Barkley Memorial Gifts to
Dr. Irvin Abell and Dr. A. T. McCormack**

We are indebted to Mr. Gerald Griffin, Lexington correspondent of the Courier-Journal, for this and several other photographs used in this issue.

Among operations which had added widely to his reputation was the Caesarean operation. His granddaughter, Mrs. Ridenbaugh, states, in his biography, that he did the first successful operation of this type in the United States, the operation being done in New York, and she further relates that three trips were made to England for the execution of the same procedure, two resulting in saving both mother and child. The reason for these trips to Europe was known only to his family, as none of his cases was published, so modest was he.



LOUIS FRANK, M.D.

That his New York case was not the first operation of the kind done in America does not detract one iota from McDowell's fame. As a matter of fact, the first Cesarean operation done in the United States of which there is any record, by word of mouth or otherwise, was done in 1794 by Dr. Jesse Bennett of Rockbridge County, Virginia, the operation being performed upon his wife, resulting in the delivery of a daughter who lived to be seventy-seven years of age. It is probably not a mere coincidence that Dr. Bennett and Dr. McDowell, students of Dr. Humphrey, of Lexington, Virginia, were pioneer abdominal surgeons. In this connection, I wish to correct the generally accepted belief of my profession that the first Caesarean section in America was done in Newton, Ohio, by Dr. Richmond, the lustre of whose name and work

is in no wise dimmed by the fact that he had been preceded by the two students of Humphrey with unpublished and unreported cases.

But to return to a discussion of the instruments, had they not the right of distinction through McDowell's primary ownership and use, our interest would nevertheless be claimed because of their use in restoring health to a poor young boy who later was to become the eleventh President of the United States, James K. Polk of Tennessee. The great frontier surgeon operated upon Polk for hernia and several years later, when he had reached the age of seventeen, Polk returned to Danville and was again operated upon by the doctor for a stone in the bladder. These are the identical instruments used in that operation. It was performed in the same room in which Mrs. Crawford was operated upon, namely, the upstairs room back of the second floor front room which latter probably was Dr. McDowell's bedroom. The inscription which Dr. Barkley placed on the instrument case states that Polk was fourteen years old when this operation for stone was done. This reference to his age was probably taken from Dr. Samuel D. Gross' Biography of McDowell, which makes this statement, though all other writers on this subject state that Polk was seventeen and not fourteen years of age at the time.

Furthermore, these instruments were used by Dr. McDowell in thirty-two successful removals of stone in the bladder, all without a single death, a most phenomenal record when one considers the time, the surrounding circumstances and the probability of the marked impairment in the constitutions and health of at least a few of the individuals.

These instruments and case were presented by Dr. McDowell to Dr. Benjamin W. Dudley, of Lexington, also an outstanding Kentucky surgeon of a very wide

reputation for his operations for stone. Dr. Dudley did two hundred and twenty-five operations for stone, many doubtless with Dr. McDowell's instruments, and in the first one hundred consecutive cases of the series, there was not a single death. Again a most remarkable record.

To me as a surgeon, and I am sure to all of those who have been in any way associated with operative procedures, the surgical work of such men as McDowell and Dudley and the fortitude and courageous spirit of the men, women and children who submitted themselves to these surgical operations must be difficult of understanding, if not absolutely incomprehensible. Consider for a moment the anxiety and forebodings of those who today must subject themselves to major operative procedures, even though the work is done in modern hospitals, with trained nurses and every equipment and device known to science to maintain the patients' comfort, to allay their suffering and with the beneficent use of an anaesthetic to induce unconsciousness so that not the slightest twinge of pain is felt during the most prolonged and difficult type of operation. These pioneer people were made of stern stuff and neither they nor their surgeons had any of these advantages. So, I repeat, when one thoughtfully evaluates their work and the acquiescence of their patients, their surgery and their results are the more remarkable and the less understandable from whatever viewpoint one may regard them.

Following the death of Dr. Dudley, the instruments were bequeathed to Dr. Bush, and were used by him in many brilliant and lifesaving operations. A daughter of Dr. Bush, Miss Nannie M., was for a long time a patient of Dr. Barkley and she presented these instruments to him as an evidence of her gratitude and affection.

In addition to the instruments, the scales and the spatula, Mrs. Barkley is also presenting a copy of the "Transactions of the Kentucky State Medical Association," which contains the full proceedings, including the memorial address of Dr. Gross, upon the occasion of the dedication of the monument to Dr. McDowell, which stands in the park in this city. The volume also includes the beautiful and classical address of Dr. Richard O. Cowling, of the University of Louisville, made on that occasion when he presented to Dr. Gross the knocker from the front door of the McDowell home in which we now are, and which sacred memento has been so graciously returned to this Memorial by the Medical Society of Philadelphia.

Supplementing the objects heretofore mentioned, I am personally adding to this collection a brochure containing the notice of the Tenth Annual Meeting of the American Medical Association, held in Louisville in 1859. A second meeting was held in Louisville in 1875 and was notable for the fact that the project for the erection of a memorial in McDowell Park in this city (Danville) and the removal of the bodies of Dr. McDowell and his wife was then first suggested by Dr. John D. Jackson, a local surgeon of eminence and note. It was, however, not until four years later, in 1879, that the culmination of his proposal was attained under the chairmanship of the then brilliant young surgeon, Lewis S. McMurtry, Dr. Jackson having died in the meanwhile.

I am also adding a photograph of Dr. Walter Brashear, copied from a daguerreotype. Brashear was a graduate of Transylvania and the University of Pennsylvania, an eminent Kentuckian and a colleague and contemporary of Dr. McDowell, and I deemed it quite fitting that his photograph should hang in the McDowell home.

Brashear, according to Dr. David Yandell, did the first successful hip joint amputation that was ever performed, sufficient upon which to rest his fame. This operation was done upon a negro slave and was performed in 1806 in the Kentucky frontier about fifty miles from here. Larrey, surgeon to the Great Napoleon, had previously done two hip joint amputations which were unsuccessful and, if I mistake not, he subsequently did four others with the same unfortunate results. Brashear later removed to Louisiana, where he died in 1860. He had journeyed to China, where he exercised his surgical skill upon the wife of a mandarin, which would have terminated tragically for him, had his patient failed to recover.

Mr. Wooton, through the kindness and magnanimity of Mrs. Barkley and her daughter, Roberta, it gives me great pleasure to place these various treasures of inestimable value in your care, to be maintained in this Memorial as the property of the Commonwealth of Kentucky and of the McDowell Memorial Home. I am sure they will be given every care fitting their history and their previous ownership and I trust that to those viewing them and learning their history and association, they may become not only an inspiration, but a reminder of our priceless heritage as Americans, as Kentuckians, and as Physicians.

* DR. VANCE: It is my pleasure and privilege to introduce to you Hon. Chenault Huguely, Danville, who will present the Weisiger Memorial Tablet.

ADDRESS

MR. HUGUELY: A community is just as great as are the heart and mind of those who inhabit it. Danville and Boyle County have been distinguished since the founding of this Kentucky country as a part of the Commonwealth of Virginia. This town has been outstanding in the realm of political study, in education, in the field of business, in the character and ability of those representing its professions.

Especially has this town stood in the forefront in the unusual ability—yes, genius—of those who reflect its medical and surgical history. It would be useless for me to recount the names of those who have so worthily upheld the reputation, down to the present time, of that world-famous genius, McDowell, in whose memory this building has been dedicated today.

And yet, there are other worthy citizens of Danville who have carried on this tradition and who have made this memorable occasion possible. Were it not for that fact, this house would not be preserved today and we would not stand here to dedicate it as a shrine where all who admire great deeds may assemble to bear testimony.

We are met here to dedicate an enduring token to the memory of a member of one of our pioneer and distinguished families—John Gill Weisiger, former owner of this famous house, the son of John Rochester Weisiger, a physician, nephew of Dr. Evan Weisiger, of Texas, a physician, and grandson of Dr. Joseph Weisiger, prominent physician of his day and a contemporary of Dr. Ephraim McDowell.

The only surviving child of Dr. John Rochester Weisiger, Miss Emma Weisiger, and her late sister, Mrs. Lucy Weisiger Harding, have contributed so generously to make this memorial to Dr. McDowell possible; and also Miss Emma Weisiger has made it possible that the Old Courthouse Square, where the Commonwealth of Kentucky had its birth, may be preserved for all times as a memorial to her brother, John Gill Weisiger.

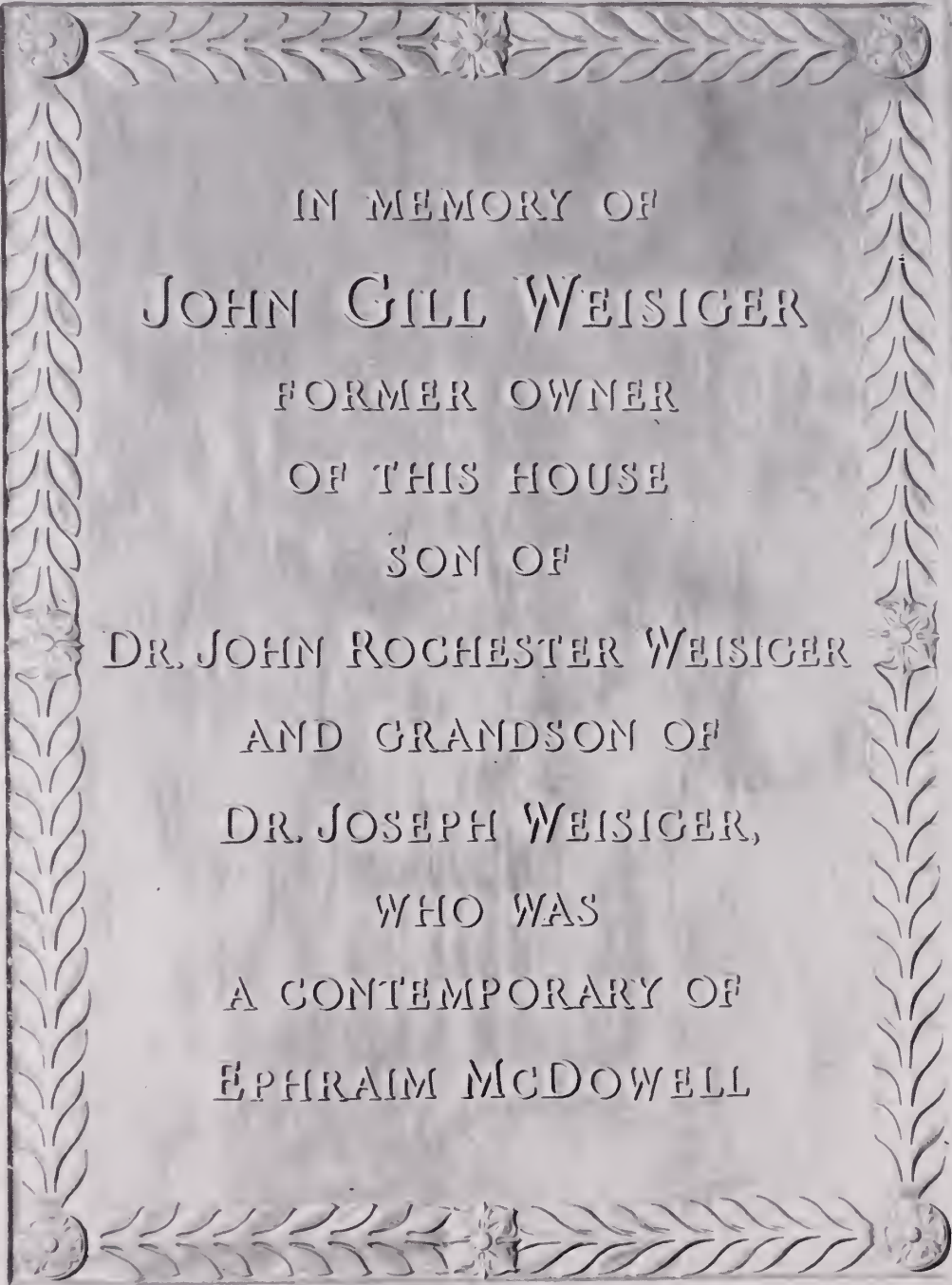
It is due to the patience and foresight of Mr. Weisiger that these two ancient and honorable landmarks have been preserved.

And now, on behalf of this community, I acknowledge its deep gratitude for these splendid and generous gifts and express a sense of the obligation which we owe to the memory of John Gill Weisiger. It is altogether fit and proper that the Old Courthouse Square should be known and kept as a memorial to Mr. Weisiger. It was he who preserved and refused to part with these precious possessions. May full honor be done his memory. He who preserves and defends is due the same full gratitude as he who creates or engages in the heat of battle.

As is the part of him who goeth down into the battle,
So shall his part be who tarrieth by the stuff.

It is a privilege to bear testimony to the work of this fine family and here to dedicate this bronze in memory of one of its worthy sons.

It is regretted that, because of a slight illness, Mr. Weisiger's surviving sister, our friend and neighbor, Miss Emma Weisiger, is not present, but we have with us the Honorable J. Lee Moore, a great-grandson of Dr. Joseph Weisiger,



IN MEMORY OF
JOHN GILL WEISIGER
FORMER OWNER
OF THIS HOUSE
SON OF
DR. JOHN ROCHESTER WEISIGER
AND GRANDSON OF
DR. JOSEPH WEISIGER,
WHO WAS
A CONTEMPORARY OF
EPHRAIM MCDOWELL

and especially his daughter, a great-great-granddaughter of Dr. Joseph Weisiger, this dainty and beautiful and gracious little girl, Lucy Lee Moore, who will now reveal this tablet to our admiring view.

UNVEILING OF WEISIGER MEMORIAL TABLET

Little Miss Lucy Lee Moore, daughter of Honorable Lee Moore, Franklin, Kentucky, and great-great-granddaughter of Dr. Joseph Weisiger.

DR. VANCE: Acceptance of the Arch Barkley Memorial Gifts and the Weisiger Memorial Tablet will be made by General Bailey P. Wooton, Frankfort, Director of Division of Parks, Department of Conservation, and formerly Attorney General of Kentucky.



GENERAL BAILEY P. WOOTON

GENERAL WOOTON: Mr. Chairman, Dr. Frank, Dr. McCormack, and my Friends: The gift of these instruments used by Dr. Ephraim McDowell in some of his epochal operations is received with a promise that they will be carefully preserved to remind us of their successful use, and of the hope and happiness Dr. McDowell brought to thousands of people by relieving them of their pain and misery. We accept them in the name of the Commonwealth of Kentucky, and will keep them safe for the generations to come.

Mr. Moore, we accept this beautiful plaque commemorating the lives of John Gill Weisiger, former owner of this house, son of Dr. John Rochester Weisiger, and grandson of Dr. Joseph Weisiger, some of whom were physicians and contemporaries of Dr. McDowell and helped make it possible for the Kentucky State Medical Association to acquire this Home and through whom it has been handed down through generations of his descendants and kept and preserved by them. We are indeed grateful to them. I thank you.

Minutes of the Executive Board of the Custodians of the Ephraim McDowell-Jane Todd Crawford Memorial Home

Following the dedication of the Ephraim McDowell-Jane Todd Crawford Home on May 20, 1939, at Danville, Kentucky, the Custodians met at 6:30 p. m., in dinner session at the Gilcher Hotel. Dr. J. Rice Cowan, resident Custodian, presided. A representative group of the Custodians attended.

After discussion of finances of the Memorial, motion was made by Dr. A. T. McCormack, seconded by Dr. E. L. Henderson and unanimously passed that Dr. E. V. Mastin, St. Louis, Missouri, great-great-grandson of Dr McDowell, become honorary and hereditary member of the Executive Board for life, and that this position be continued as long as there are descendants of Dr. McDowell in the medical profession.

Upon motion of Dr. E. L. Henderson, seconded by Dr. Frank Boyd and unanimously passed, the following were elected chairmen and members of the Executive Board of the Custodians:

E. V. Mastin, M.D., St. Louis, Honorary Chairman.
Irvin Abell, M.D., Louisville, Chairman.
Emil Novak, M.D., Baltimore.
Louis Frank, M.D., Louisville.
C. A. Vance, M.D., Lexington.
J. Rice Cowan, M.D., Danville.
A. T. McCormack, M.D., Louisville.

After full discussion, it was moved by Dr. Abell, seconded by Dr. J. B. Lukins, Louisville, and unanimously passed, that no memorabilia should be included in the Home except those intimately connected with the life of Ephraim McDowell, or that of Mrs. Jane Todd Crawford, or articles of that same period and used in the same neighborhood. The Executive Board was definitely instructed that this is a memorial to Dr. Ephraim McDowell and Jane Todd Crawford and their associates.

Motion for adjournment was made.

A. T. MCCORMACK, M.D., *Secretary.*

THE DEDICATION OF THE EPHRAIM McDOWELL-JANE TODD CRAWFORD MEMORIAL HOME

E. P. HELLER, M.D.*
Kansas City, Missouri

(Reprinted from the Journal of the Missouri State Medical Association, Vol. XXXVI, No. 7, July, 1939.)

The dedication in Danville, Kentucky, on May 20, of the home of America's pioneer abdominal surgeon to the memory of the surgeon himself and his most courageous patient was an inspiring occasion. A detailed history of Ephraim McDowell will not be given for he has been the subject of many volumes and the recipient of many tributes from that of Prof. Samuel D. Gross in 1852 down to the historic address of Dr. Irvin Abell, of Louisville, at the ceremonies on May 20, 1939. These were held at the home in Danville where, on Christmas Day in 1809, the first deliberate operation for removal of an ovarian tumor was performed. Nor shall we consider in detail the life, the fortitude, the agony and the recovery of Jane Todd Crawford who, after a twenty-five minute operation under the anesthetic of prayer and a convalescent period of twenty-five days in Dr. McDowell's home, returned as she had come, by horseback, to her home, sixty miles away at Greensburg. Rather would your commentator give the sentimental thoughts which ran through his mind as he observed the dedication, explored the home itself, met the descendants of those pioneer people of Kentucky, and came and went over the Jane Todd Crawford Trail, once creek bed and woodland path and now a modern motor road.

Kentucky in May must be Kentucky at her best. Her rounded, tree-covered hills, the tidy farms, the roadsides fringed with iris, climbing roses and peonies where thoughtful women had assumed a tender duty, the wilder nooks and pastures white with daisies, the rollicking colts, new calves and lambs on every side were a soothing influence in a troubled world. Only by reason of the extremely tortuous nature of the road, despite its modern surfacing, could one believe that the road into Danville was actually the trail of 1809 and of the buffaloes of primeval America. One could picture Jane Crawford in a bleaker season, and in a wild, sparsely settled country riding down the dips in the road, her distorted abdomen pounding upon the pommel of the saddle. Where now a neat bridge spans a creek, there she must have forded, and there her horse sipped water. Little did she think, in her preoccupation, that the land over which she rode would be red some day with the blood of brothers in mortal combat to preserve the traditions which she and her husband, their children and their neighbors, were establishing. Lebanon and Perryville were merely wide spaces in the road in those days. As she rode out to an unknown destiny in that December of 1809, she could not ever have surmised that a boy baby, 10 months old, was being nurtured by backwoods parents at Hodgenville, less than fifty miles away, a boy who was later to be famous as the man Lincoln. Nor could she have known of the Davis family's 18-month-old Jefferson at Fairview, little more than an hour's ride to the west of Greensburg in these days of motor roads, but several days' travel in the early 19th century. One pauses in wonderment at the personalities which were cradled in this "great meadow," Kentucky, at the very moment in history to which a large gathering was paying respect upon this day in May one hundred thirty years later.

Arriving before the McDowell Home in an out of the way section of Danville, with what is apparently a Negro lodge hall directly across the street, one is reminded of the peculiar location of other shrines and one marvels at the ability and ingenuity of antiquarians to rescue them and restore them to a more appreciative posterity. To Dr. Arthur T. McCormack and

*Dr. E. P. Heller, Kansas City, Vice-Chairman of the Council, at the request of the Council, represented the Missouri State Medical Association at the dedication of the Ephraim McDowell-Jane Todd Crawford Memorial Home, Danville, Kentucky, on May 20, 1939.

his able wife, to the Kentucky State Medical Association and its Auxiliary, to the host of custodians, to family descendants and townspeople who were responsible for this magnificent restoration, the people of Kentucky, but more especially the American medical profession, owe a debt of profound gratitude. A platform had been constructed in the street before the Home, and, with chairs and microphones, everything seemed to be in readiness. Even the clouds had cleared away to admit a bright and warming sun. But the McDowell house itself was the center of attraction and pilgrims swarmed about its comfortable rooms, its hallways, out into its garden and upon the front steps. The street was closed to traffic and the entire area was filled with milling spectators and participants in the ceremonies.

In that gathering was a sizable group of outstanding American medical men, foremost of whom was Dr. Irvin Abell, the retiring President of the American Medical Association, gracious, learned, democratic and just the type to represent our profession and his State at such an event. A wave of an outstretched hand and an informal call to various men and women in the crowd by that genial public health servant of Kentucky, Dr. Arthur T. McCormack, and in a twinkling the platform seemed to be fully occupied and the ceremonies begun.

Dr. Charles A. Vance, Chairman of the Council of the Kentucky State Medical Association, presided. He introduced the Rev. William E. Phifer, Danville, who pronounced the invocation in the absence, due to illness, of Dr. R. L. McCloud (D.D.), President of Centre College. Dr. Abell's address, which followed, was a masterpiece of historical facts woven into a romantic story of a pioneer doctor, the Father of Ovariectomy and Founder of Abdominal Surgery, and his courageous patient, Jane Todd Crawford, mother of several children and seventeen years his senior, yet willing to risk her life at his hands.

The Home, unique in its dedication to doctor and patient, passed forever into the keeping of the State of Kentucky when it was accepted for the State by its young and eloquent Governor A. B. "Happy" Chandler. In an extemporaneous address filled with dates and facts, which he must have known well to use so freely, this rather amazing young executive moistened the eye of more than one of his listeners. Particularly apt was his reference to the courage of McDowell the surgeon, about to operate upon a woman for a disease formerly doomed to neglect while angry townspeople gathered outside to await the issue and if need be to apprehend him and perhaps execute him if his patient died. Everyone knew what the Governor meant by his reference to courage against odds, for he was deeply involved in controversy with mine unions in the coal fields of Harlan County and was, at that very moment, being persecuted by his opponents for his use of the National Guard. All who had journeyed to Danville that day had passed detachments of armored trucks and machine gun companies headed for eastern Kentucky and all must have realized the grimness of the possibilities. "Happy's" last campaign with Senator Barkley also came to mind and, quite foreign though it was, the thought was inescapable that on this day this audience had perhaps heard another Kentucky man of destiny.

Following the modern stream-lined Governor Chandler, occupant of the office which was once held by McDowell's father-in-law, Governor Shelby, the State's first chief executive, was the proud great great-grandson of McDowell, Dr. Edward Vernon Mastin, St. Louis, who represented the Southern Surgical Association. Missourians can well be proud of the men and women whom Dr. Mastin typifies, whose forbears had crossed into Missouri and there planted the germ of a kindred culture. Dr. Mastin's address was a tribute as much to Mrs. Crawford as to his illustrious grandparent. One had only to recall the painting by Knapp, showing the frock coated surgeon and his nephew standing over the helpless woman strapped to a table in that very house across the street from the speaker to vision the whole array of chances for doctor and patient in those pre-antiseptic days. We of this

modern age are indeed the soft recipient of benefits of the trials, the agony and the vast accomplishments of a hardy past.

Next on the program was to have been Dr. George P. Muller, President of the College of Physicians of Philadelphia and occupant of the Chair of Surgery at Jefferson Medical College, which was founded in 1910, to commemorate Samuel D. Gross, who has been called "Greatest American Surgeon" and "Emperor of American Surgery," the one man whose researches and whose prestige had above all others established the validity of McDowell's position as "Founder of Abdominal Surgery." Nothing would have been more fitting in 1939 than to have had on the platform the direct professional descendant of the master surgeon who delivered the dedicatory address in May, 1879, when the McDowell monument was unveiled in the park nearby. As a keepsake of that occasion, Gross had been presented with the Door Knocker from Dr. McDowell's front door, and he had responded "in a most touching manner, saying he will ever keep sacred the memento presented to him on this memorable occasion . . . as around it clustered so much medical history of an almost forgotten past," to use the words of one historian. Having, from the day of baptism into the medical guild as a student, heard of Ephraim McDowell's exploits from the lips of the late W. W. Keen and the late J. Chalmers DaCosta, two of Gross' successors, your commentator was prepared for a rare treat. It was most fortunate that so outstanding and lovable man as Dr. Arthur T. McCormack was at hand to act for the distinguished Muller, gentleman, scholar and worthy successor of Gross, who was unavoidably absent.

Dr. J. Duffv Hancock made the closing address as Acting President of the Kentucky State Medical Association. Dr. McCormack introduced the men and women on the platform to the audience and the outdoor ceremonies passed into history with the benediction by Rev. Franklin Davis, D. D., Rector of Trinity Episcopal Church at Danville. As many as could do so crowded into the Home immediately to witness the collection of instruments used by McDowell, to hear the Honorable Chenault Huguey as he spoke at the unveiling of the Weisiger Memorial Tablet, to listen to Dr. Louis Frank, Louisville, Past President of the Kentucky State Medical Association, as he presented to the Home the Arch Barkley Memorial Gifts. As the Home and all its treasures were now to pass into the keeping of the Department of Parks of Kentucky, the acceptance by that department's director, the Honorable Bailey P. Wooton, was the final official act of the drama of May 20, 1939.

Many and varied were the unofficial acts of exploration, of photography and of conjuring up of the past indulged in by the pilgrims to that shrine as they remained to gaze again at the room in which Mrs. Crawford spent her twenty-five minutes of prayer and agony, at the old well in the garden, at the servants' quarters, the kitchen and the Door Knocker in its new glass covered case. This knocker alone told a story far more revealing than any of the formal ceremonies to anyone who would look upon it with a retrospective gaze. Was it not likely that many a statesman of the late 18th and early 19th centuries had used that knocker to call Dr. McDowell's servant to the door so that he might enter to consult the famous physician and surgeon of that wilderness town? We know James K. Polk was successfully operated upon for bladder stone by McDowell. Was it at all unlikely that the very humble had as ready an answer to the summons of the knocker as those in high state? Everything points toward the conclusion that they did. Was the Dr. Adam Rankin, who with McDowell operated an apothecary's shop next door, perhaps a forbear of Dr. Fred Rankin, the famous surgeon of Lexington, who sat nearby us on the platform? There is every reason to believe he was and that he had used that old knocker often. Then, too, it has been discovered that, except for one short period, the house has been in possession of doctors or their heirs ever since Dr. McDowell's death,

so many a metallic call by day and by night for a McDowell or a Weisiger has clanged in the hallway of that grand old colonial home. Its sojourn in the possession of Samuel D. Gross, his heirs and the College of Physicians of Philadelphia is a heritage which would endow almost any knocker with glamor and certainly makes of this one a relic of the first magnitude.

Missouri may be proud that its State Medical Association, the only one besides Kentucky's, has helped in the preservation and restoration of this priceless shrine to Ephraim McDowell and Jane Todd Crawford. Individual Missouri physicians who are custodians are Drs. Fred W. Bailey, Vilray P. Blair, Edward V. Mastin and Robert E. Schleuter, St. Louis; Dudley S. Conley, Columbia, and Logan Clendening, Kansas City.

After an afternoon of basking in the reflected light of glorious tradition and of contemporary stars, your commentator was content, like the Arab, to silently steal away. His small contribution, ready if he had dared to add a single word to those so ably spoken, would have been somewhat as follows:

"Mr. Chairman, Distinguished Guests and Friends:

"As the representative of the Missouri State Medical Association on this occasion I wish to convey to you of Kentucky our sincere affection and esteem for your great men, both living and dead.

"To us Ephraim McDowell lives today in the spirit of your men of medicine.

"For our Kentucky heritage in men, women and ideals, Missouri medicine takes this occasion to render thanks."

CUSTODIANS

EPHRAIM McDOWELL-JANE TODD CRAWFORD MEMORIAL HOME

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Abell, Irvin—Louisville, Kentucky
 Allen, A. W.—Boston, Massachusetts
 Allen, E. S.—Louisville, Kentucky
 Allenburger, C. A.—Columbus, Nebraska
 American Gynecological Society, Evanston, Ill.
 Armstrong, R. M.—Lexington, Kentucky.
 Arneill, James Rae—Denver, Colorado
 Bailey, Fred W.—St. Louis, Missouri
 Barnes, Frank L.—Houston, Texas
 Barnett, Chas. E.—St. Petersburg, Florida
 Bass, A. L.—Louisville, Kentucky
 Bird, Clarence E.—Louisville, Kentucky
 Blackburn, John H.—Bowling Green, Ky.
 Blair, V. P.—St. Louis, Missouri
 Boland, Frank K.—Atlanta, Georgia
 Boyd, Frank—Paducah, Kentucky
 Brennan, Robt. E.—New York, New York
 Brown, O. W.—Falmouth, Kentucky
 Buckner, Hubbard T.—Seattle, Washington
 Bullock, W. O.—Lexington, Kentucky
 Campbell, Willis C.—Memphis, Tennessee
 Carraway, C. N.—Birmingham, Alabama
 Cawood, W. P.—Harlan, Kentucky
 Clendening, Logan—Kansas City, Missouri
 Conley, Dudley S.—Columbia, Kentucky
 Cowan, J. R.—Danville, Kentucky
 Crawford, W. W.—Hattiesburg, Mississippi
 Crile, George W.—Cleveland, Ohio
 Crotti, Andre—Columbus, Ohio
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 Gatch, W. D.—Indianapolis, Indiana
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 Hanes, G. S.—Louisville, Kentucky
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 Henry, M. J.—Louisville, Kentucky
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Name — Address

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 Kentucky State Medical Assn., Louisville, Ky.
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 Kretchmer, H. L.—Chicago, Illinois
 Lewis, Dean—Baltimore, Maryland
 Libman, Emanuel—New York, New York
 Lower, Wm. E.—Cleveland, Ohio
 Lukins, J. B.—Louisville, Kentucky
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 Mendillo, A. J.—New Haven, Connecticut
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 Missouri State Medical Assn. St. Louis, Mo.
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 Pusey, Wm. Allen—Chicago, Illinois
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 Scott, John W.—Lexington, Kentucky
 Shands, H. R.—Jackson, Mississippi
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 Wilson, Judge S. M.—Lexington, Kentucky
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EPHRAIM McDOWELL-JANE TODD CRAWFORD MEMORIAL HOME

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Bailey, H. T.—Phoenix, Arizona	Erkiletian, D. H.—Hopkinsville, Kentucky
Baker, David—Miami Beach, Florida	Estes, W. L., Jr.—Bethlehem, Pennsylvania
Balfour, D. C.—Rochester, Minnesota	Fitch, Jas. W.—Portsmouth, Ohio
Barnhill, J. E.—Owensboro, Kentucky	Flexner, Morris—Louisville, Kentucky
Beck, Claude S.—Cleveland, Ohio	Fleming, S. W.—West Palm Beach, Florida
Benjamin, Julian E.—Cincinnati, Ohio	Follanshee, Geo. Edw.—Cleveland, Ohio
Bennett, G. E.—Corry, Pennsylvania	Frazer, T. Atchison—Marion, Kentucky
Black, Wm. T.—Memphis, Tennessee	Frazier, Harry S.—Louisville, Kentucky
Blakely, Stuart B.—Binghampton, New York	Gardner, W. E.—Louisville, Kentucky
Bloss, Jas. R.—Huntington, West Virginia	Garr, Chas. R.—Flemingsburg, Kentucky
Bourland, J. W.—Dallas, Texas	Gary, W. E.—Hopkinsville, Kentucky
Bradley, Ernest B.—Lexington, Kentucky	Gatewood, M. A.—Chicago, Illinois
Broaddus, B. S.—Irvine, Kentucky	Gaupin, Chas. E.—Louisville, Kentucky
Brown, Marion M.—Mexia, Texas	Glenn, Jno. P.—Russellville, Kentucky
Brunn, Harold—San Francisco, California	Grad, Herman—New York City, New York
Butler, E. C.—Caldwell, New Jersey	Gray, George M.—Kansas City, Kansas
Campbell, Willis C.—Memphis, Tennessee	Green, J. H.—Louisville, Kentucky
Cannady, John E.—Charleston, West. Va.	Greenough, Robt. B.—Boston, Massachusetts
Carothers, Robt.—Cincinnati, Ohio	Gregory, S. F.—Bradfordsville, Kentucky
Carpenter, J. G.—Bardstown, Kentucky	Greiwe, John E.—Cincinnati, Ohio
Cheever, David—Boston, Massachusetts	Hall, Gaylord, C.—Louisville, Kentucky
Clarke, F. H.—Lexington, Kentucky	Hall, James K.—Richmond, Virginia
Clute, Howard M.—Boston, Massachusetts	Hammon, Louis—Baltimore, Maryland
Cocke, Chas. J.—Ashville, North Carolina	Harned, H. S.—Elizabethtown, Kentucky
Cofer, Olin S.—Atlanta, Georgia	Hartwell, John A.—New York, New York
Cohn, Isadore—New Orleans, Louisiana	Henderson, M. S.—Rochester, Minnesota
Coller, Frederick—Ann Arbor, Michigan	Heyd, Charles G.—New York City, New York
Conwell, H. Earle—Birmingham, Alabama	Holloway, V. D.—Knoxville, Tennessee
Coolidge, L. E.—Greenville, Tennessee	Holzer, Charles E.—Gallipolis, Ohio
Cordes, Frederick C.—San Francisco, Calif.	Horine, Emmet F.—Louisville, Kentucky
Craig, S. D.—Winston Salem, North Carolina	Horn, H. W.—Wichita, Kansas
Cron, Roland S.—Milwaukee, Wisconsin	Horsley, J. Shelton—Richmond, Virginia
Culbertson, Carey—Chicago, Illinois	Houston, E. B.—Murray, Kentucky
Cull, L. L.—Frankfort, Kentucky	Hruby, A. J.—Chicago, Illinois
Curfman, George H.—Salida, Colorado	Hudson, Otho C.—Hemstead, New York
Cushing, Harvey, New Haven, Connecticut	Huggins, R. R.—Pittsburgh, Pennsylvania
Cutler, Elliott C.—Boston, Massachusetts	Hunner, Guy L.—Baltimore, Maryland
Danville Laundry & Dry Cleaning Company—Danville, Kentucky	Hunt, Claude J.—Kansas City, Missouri
Davis, A. E.—New York, New York	Hunt, Josephine D.—Lexington, Kentucky
Davis, Carl B.—Chicago, Illinois	Hunt, Kenneth S.—Griffin, Georgia
Davis, Lincoln—Boston, Massachusetts	Husted, Eugene—Greenville, Ohio
DeLee, J. B.—Chicago, Illinois	Ireland, M. W.—Washington, D. C.
Denham, R. H.—Grand Rapids, Michigan	Jackson, R. H.—Madison, Wisconsin
Dollar, Dougal M.—Louisville, Kentucky	Jarcho, Julius—New York City, New York
	Jones, Daniel Fiske—Boston, Massachusetts

Name — Address

Jones, E. S.—Hammond, Indiana
 Jones, Walter C.—Miami, Florida
 Joyce, T. M.—Portland, Oregon
 Kanabel, Allen B.—Chicago, Illinois
 Keen, L. O.—Balboa, Canal Zone
 Keffer, Smithfield—Grayson, Kentucky
 Kelly, C. C.—Hartford, Connecticut
 Kelly, H. A.—Baltimore, Maryland
 Kennedy, James Wm.—Philadelphia, Penn.
 Kennedy, R. D.—Globe, Arizona
 King, James E.—Buffalo, New York
 King, Jos. E. J.—New York City, New York
 Kinnaird, Virgil G.—Lancaster, Kentucky
 Kinsman, J. Murray—Louisville, Kentucky
 Knighton, J. E.—Shreveport, Louisiana
 Krabulik, E. J.—Los Angeles, California
 Kretschmer, Herman L.—Chicago, Illinois
 Kreuscher, Philip H.—Chicago, Illinois
 Krumbharr, E. B.—Philadelphia, Penn.
 Lahey, Frank H.—Boston, Massachusetts
 Laird, Wm. R.—Montgomery, West Virginia
 Lear, Maxwell—New Haven, Connecticut
 Leggett, A. E.—Louisville, Kentucky
 Leopold, H. P.—Philadelphia, Pennsylvania
 Lewis, Bransford—St. Louis, Missouri
 Light, Richard U.—Kalamazoo, Michigan
 Lillenthal, Howard—New York City, New York
 Litzenberg, Jennings C.—Minneapolis, Minn.
 Livingston, W. R.—Camarillo, California
 Long, C. F.—Elizabethtown, Kentucky
 Loveman, Adolph B.—Louisville, Kentucky
 Lyday, Russell O.—Greensboro, N. Carolina
 Lynch, J. M.—New York City, New York
 McBee, K. S.—Owenton, Kentucky
 McCarty, A. C.—Louisville, Kentucky
 McClarin, Wm. M.—Louisville, Kentucky
 McClellan, Ben R.—Xenia, Ohio
 McDowell, Marshall—Cynthiana, Kentucky
 McGraw, Arthur B.—Detroit, Michigan
 McHenry, J. H.—New York City, New York
 McMahan, Alphonse—St. Louis, Missouri
 McReynolds, John O.—Dallas, Texas
 McRoe, Floyd W.—Atlanta, Georgia
 Marks, S. B.—Lexington, Kentucky
 Marshall, Victor F.—Appleton, Wisconsin
 Marx, Rudolph—Los Angeles, California
 Mason, J. M.—Birmingham, Alabama
 Mason, Robin S.—Memphis, Tennessee
 Masson, James C.—Rochester, Minnesota
 Mathe, Chas. P.—San Francisco, California
 Matthews, Harvey B.—Brooklyn, New York
 Matthews, O. H.—Atlanta, Georgia
 May, O. L.—Danville, Kentucky
 Mayo, C. H.—Rochester, Minnesota
 Mayo, W. J.—Rochester, Minnesota
 Miller, A. Merrill—Danville, Illinois
 Miller, Joseph L.—Chicago, Illinois

Name — Address

Miller, O. P.—Louisville, Kentucky
 Miller, Roy Ben—Parkersburg, West Virginia
 Mills, W. M.—Topeka, Kansas
 Mock, Harry E.—Chicago, Illinois
 Moore, John Walker—Louisville, Kentucky
 Moren, John J.—Louisville, Kentucky
 Morton, John J.—Rochester, New York
 Mosby, C. V.—St. Louis, Missouri
 Mount, Walter B.—Montclair, New Jersey
 O'Keefe, J. E.—Waterloo, Iowa
 Orndoff, B. H.—Chicago, Illinois
 Parker, Owen W.—Ely, Minnesota
 Parry, Angenette—Huntington, New York
 Parsons, Lawrence—Reno, Nevada
 Patterson, D. C.—Bridgeport, Connecticut
 Patterson, John—Frankfort, Kentucky
 Payne, Marshall J.—Staunton, Virginia
 Peers, Robert A.—Colfax, California
 Penn, Jarrell—Knoxville, Tennessee
 Pontius, S. G.—Lancaster, Pennsylvania
 Potter, Alfred H.—Springfield, Ohio
 Price, R. M.—Sweetwater, Tennessee
 Quain, E. P.—Bismark, North Dakota
 Rafsky, Henry A.—New York City, N. Y.
 Ralls, A. W.—Gadsden, Alabama
 Rankin, Geo. L.—Paris, Kentucky
 Rardin, Jos. S.—Portsmouth, Ohio
 Rawls, J. E.—Suffolk, Virginia
 Rawls, J. L.—Norfolk, Virginia
 Ravdin, I. S.—Philadelphia, Pennsylvania
 Reeves, T. B.—Greenville, South Carolina
 Rehfeldt, F. E.—Jackson, Mississippi
 Renshaw, Kinsley—Toledo, Ohio
 Richardson, E. H.—Baltimore, Maryland
 Ridgway, S. H.—Shepherdsville, Kentucky
 Ritter, Frank—Louisville, Kentucky
 Roberts, C. W.—Atlanta, Georgia
 Roberts, Stewart—Atlanta, Georgia
 Robinson, M. R.—New York City, New York
 Roeder, Clyde A.—Los Angeles, California
 St. Aseph Chapter Daughters of the
 American Revolution, Danville, Ky.
 Sanders, R. L.—Memphis, Tennessee
 Sellers, Thomas Benton—New Orleans, La.
 Shallenberger, W. F.—Atlanta, Georgia
 Shaw, Milton—Lansing, Michigan
 Sherrill, Coite L.—Statesville, North Carolina
 Simmons, R. C.—Alexandria, Louisiana
 Simpson, Jno. R.—Pittsburgh, Pennsylvania
 Slemons, J. M.—Los Angeles, California
 Smith, Dudley—Oakland, California
 Smith, Elsworth S.—St. Louis, Missouri
 Smith, Geo. V.—Brookline, Massachusetts
 Snure, Henry—Los Angeles, California
 Sommer, Geo. N. J.—Trenton, New Jersey
 Sommer, Geo. N. J., Jr.—Trenton, New Jersey
 Sprague, Geo. P.—Lexington, Kentucky

Name -- Address

Spurling, R. Glenn—Louisville, Kentucky
 Stambaugh, H. G.—Ashland, Kentucky
 Stapleton, Wm. J., Jr.—Detroit, Michigan
 Starr, Silas H.—Louisville, Kentucky
 Stein, Irving F.—Chicago, Illinois
 Steinke, Carl R.—Akron, Ohio
 Stovall, J. Watts—Grayson, Kentucky
 Stroud, J. B.—Louisville, Kentucky
 Taylor, A. Porter—Lexington, Kentucky
 Thurston, R. C. Ballard—Louisville, Ky.
 Trout, Hugh H.—Roanoke, Virginia
 Turlington, Lee F.—Birmingham, Alabama
 Turner, Paul A.—Louisville, Kentucky
 Venable, C. S.—San Antonio, Texas
 Wagner, W. A.—New Orleans, Louisiana

Name — Address

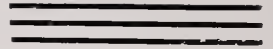
Walters, Waltman—Rochester, Minnesota
 Warren, A. W.—Canton, Ohio
 Waterworth, S. J.—Clearfield, Pennsylvania
 Weber, George T.—Olney, Illinois
 Weldon, W. A.—Glasgow, Kentucky
 West, Hugh—Deland, Florida
 West, Olin—Chicago, Illinois
 Whitaker, F. J.—Spokane, Washington
 Weiss, Mrs. P. H.—Beaumont, Texas
 Willis, Park Weed—Seattle, Washington
 Work, J. A.—Barre, Vermont
 Young, Hugh H.—Baltimore, Maryland
 1937 Entertainment Committee, K.S.M.A.
 by E. L. Henderson—Louisville, Ky.

KENTUCKY MEDICAL JOURNAL—PART II
WOMAN'S AUXILIARY SECTION

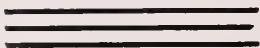
THE N.Y. ACADEMY
OF MEDICINE
JAN 19 1939
LIBRARY



JANUARY, 1939



THE PRESIDENT
Mrs. Harlan Vernon Usher, Sedalia



Achievement Project--County Auxiliary Development

Mrs. H. V. Usher, Sedalia, President

Beginning October, 1938—Ending At Annual Meeting, 1939.

List of Credits for Award to County Auxiliary
for Outstanding Achievement.

	Points
1. State and National Dues paid by 31st of March 1939	2½
2. Advisory Council from local Medical Society	2½
3. All Communications pertaining to Auxiliary Work answered immediately	2½
4. Names of Newly elected Officers and Committee Chairmen sent immediately to State President and to Editor of the Quarterly	2½
5. Report of Year's work sent to State President by August 1st.	2½
6. Delegate Representation and Report of Year's Work presented at Annual Meeting	2½
7. Program Plans for Year's Work made in advance, when New Officers are elected, and copies sent to State President and State Program Chairman	5
8. One or more Health Education Programs during the year, open to the public, or to representatives of lay organizations	10
9. Provide Speakers on Health Subjects for lay organizations. (Parent-Teacher, Church Groups, Women's Clubs, etc.)	10
10. Active participation in some project for community betterment such as assisting in Women's Field Army for Cancer Control	10
11. Give a program designed to popularize approval of the New Pre-Marital Health Examination Law re Venereal Diseases	15
12. Increase in Hygeia subscriptions, based on membership at the beginning of year	5
13. Gift of Hygeia Subscriptions to Local Libraries and Schools	5
14. Full Staff of Active Chairmen—or as many as Membership of County Auxiliary allows—to Correspond with State and National Auxiliary.	5
15. Increase in Membership (Percentage basis)	5
16. Observance of Doctor's Day for date designated	10
17. Doctor Shop Donation—for each item	2½-10
18. Jane Todd Crawford Day Observance, December 13th	10
19. Jane Todd Crawford Trail planting donations; for each lot.	2½-10

20. Cooperation in financial support of Quarterly and contributions published in the Quarterly (sent to Editor by 1st month—March, June, September, December).....2½
 News items not less than 20 during the year.....2½
 Poem—Original2½
 Picture—with cut or money to pay for cut.....2½
 Story2
 Feature—New or on any regularly carried subject. (Tuberculosis, Cancer Control, Child, etc.)2½
 Advertising contracts secured for each dollar.....2½
21. Exhibit of Year Book and History of County Auxiliary at State Annual Meeting2½
22. Clippings of publicity brought to State Annual meeting in Scrap Book or mounted on cardboard for exhibit2½
23. Historical Collection:
 Items, clippings, pictures, etc., sent to Mrs. V. A. Stilley, Benton, Chairman, or to Miss Louise Morel, 620 So. Third St., Louisville2½

Each County should keep record of every item of achievement and send monthly report to State Program Chairman, Mrs. S. C. McCoy, Preston Street Road, Louisville.

Award—Blue Ribbon.

Judging Standards—All ratings based on membership percentage at beginning of Year.

To win, small organizations have as good chance as large organizations.

PRESIDENT'S MESSAGE

Mrs. H. V. Usher, Sedalia.

Best Wishes for a Happy New Year to every Auxiliary Member! I trust we have all started the New Year with New Resolutions to accomplish much in our Auxiliary work, especially in organization work, and Health Education programs.

I am happy to tell you that Lawrence County is being organized, by our Third Vice-President, Mrs. L. S. Hayes, and before this reaches you, I feel sure that we will have a new County Auxiliary, added to our Organization.

Some more good news for you. My First Vice-President and Organization Chairman Mrs. John M. Blades of Butler, told me of some very interesting plans for organization, that

Welcome Mr. Baynham! Back home to the Quarterly have travelled Baynham's shoes!

she, Mrs. Clifton Richards of Glasgow, Second Vice-President, and Mrs. John B. Floyd, of Richmond, Fourth Vice-President, are making an effort to work out.

Dr. Thomas Walker, the first white man to build a house in Kentucky when he came through Cumberland Gap in 1751, has been selected for special honor on Doctor's Day.

All State Officers and Committee Chairmen have been appointed and they manifest a spirit of cooperation and are already functioning. I am expecting to hear from the Counties soon. I want to add here, that, I have a feeling that all County Presidents are going to be active, and prompt in replying to their correspondence, with the State President and State Chairmen. This same confidence is expressed, too, for all County Officers and Chairmen. Remember, we cannot accomplish any thing without your reports, so write us please and keep the wheels of progress turning!

Our Project for County Auxiliary Development, the adopted Program for our year's work, has been sent to all County Presidents, State Officers, Chairmen, with the request that the County Presidents read this program to the members at their first meeting.

Remember to help our Hygeia Chairman to place Hygeia in the local schools and libraries and to urge that our husbands keep Hygeia in their offices for waiting patients to read. Again remember to provide speakers on Health subjects, for lay organizations, Parent-Teacher and Church Groups, Women's Clubs, etc.

Consult your Advisory Council, in all your plans and particularly in these Health Programs.

We are still working and planning the beautification of the Jane Todd Crawford Trail. Send seeds, plants or bulbs to Mrs. A. T. McCormack of Louisville.

Your donations for Doctor's Shop will be received by Chairman Mrs. J. B. Lukins, Louisville.

Mrs. V. A. Stilley of Benton is anxiously awaiting all your Historical Collections. She is also Chairman for Archives. We combined these two projects this year under one Chairman. Please let me remind you of No. 20 of the listed Credits as follows: Contributions published in the Quarterly, sent to Editor by first of months—March, June, September, and December. News items not less than 20 during the year.

Let me insist that we study this Project and put each of the 20 items over. With your cooperation, I see no reason why we cannot make this a successful year for Auxiliary work and meet the expectation of our Parent Organization, the Kentucky State Medical Association.

MID-YEAR BOARD MEET

The Mid-Year Meeting of the Executive Board will be held Thursday, January 19th, at the Brown Hotel, Louisville.

Dr. Thomas Walker is to be the physician of special honor for Doctor's Day, this year.

Remember the Day, February 1, 1939, The National Social Hygiene Day

"Guard Against Syphilis"

A LONG ROAD—A STRAIGHT ROAD

February 1, 1939 — Third National Social Hygiene Day—another milepost on the road to syphilis control. A long stretch ahead, but we are on our way.

A long road behind us, too, and many difficulties conquered: diagnosis, treatment, cure, false shame, public indifference, official neglect. We need never travel that old hard road again.

And ahead: public education about syphilis—case-finding—treatment for all—the end of syphilis in the nation if we follow the long straight road.



Nationally famed as smartest health shoes, the Archlock and Arch-Relief shoes offer you the latest whisper in modish styling, yet assuring you of proper fitting and studied comfort. Slip on the VERONA—it comes in black, brown, suede with contrasting trim. It has a Cuban heel \$8.95.

Baynham's
SHOES OF DISTINCTION

LOUISVILLE

• LEXINGTON

Travellers go North to see Arctic Ice. But — you can look in the **APRIL QUARTERLY!**



Tuberculosis



Mrs. Lucius Ernest Smith, Louisville, State Chairman.

DOES THIS INTEREST YOU?

Careful study of the accompanying chart will show that tuberculosis is the leading cause of death in the active period of life. This definitely brands it as PUBLIC ENEMY NO. 1. While other diseases outnumber it in their grand totals, tuberculosis breaks into that period where life is worth the most to our homes, our communities and our nation.

Children taken from us in the early years of life are potential producers, but they have not yet reached the self-supporting or productive age, nor has the nation invested in them as in those who have reached the period of maturity.

Those taken from us after they have reached the period commonly called "old age" have often passed beyond the stage of productiveness and have again become liabilities to society.

We must gird ourselves for the fight against this preventable, controllable and curable disease that strikes its deadliest blow when life is worth the most to its victims and when they are worth the most to their families, communities and their nation.

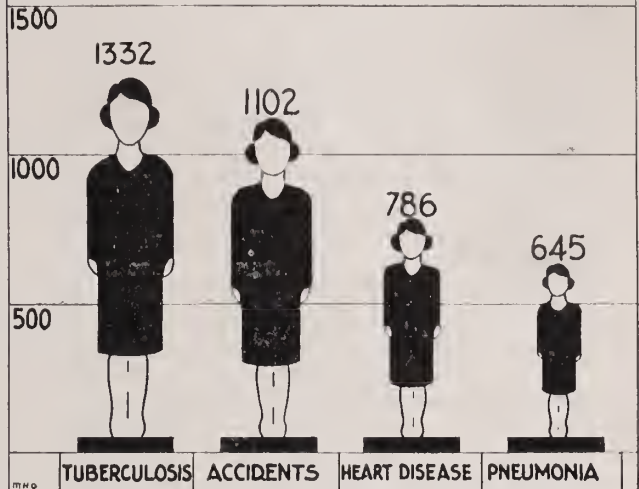
In spite of the steadily declining tuberculosis death rate in our nation, tuberculosis is still the leading cause of death in the active period of life.

Kentucky has not shared in the continued decline, but has shown a rising death rate for the last three years. Last year there were 122 more deaths due to tuberculosis than in the preceding year. The death rate of the nation is 53.5 and is steadily declining, while the death rate of Kentucky is 74.6 and is rising. This should not alarm us, but should cause us to think seriously of the far-reaching significance of the menace of tuberculosis in our State.

We must realize that the only successful way to fight this great enemy is to apply the knowledge we now have. We must teach our people that tuberculosis can be cured only when cure is started soon enough. We must make them understand that every active case of tuberculosis should be put under the care of a competent physician at once, not only to save the life of the patient, but to prevent the patient from becoming a menace to others.

We have played with tuberculosis in Kentucky while it has taken 90,370 of our people in 27 years. We can control tuberculosis when we systematically and conscientiously apply the knowledge we now have. Does this interest you?

TUBERCULOSIS • THE LEADING CAUSE OF DEATH IN KENTUCKY IN 1937 BETWEEN THE AGES OF 10 AND 50



TUBERCULOSIS has destroyed the lives of 90,370 Kentuckians in twenty-seven years. Fifty-two thousand of these died between the ages of 10 and 50.

TUBERCULOSIS challenges every local citizen of Kentucky, because it wrecks homes, robs childhood, destroys youth and blights those of mature years.

TUBERCULOSIS killed 2,186 in 1937, yet it can be prevented, controlled and cured when found early.

DOES THIS INTEREST YOU? THE KENTUCKY TUBERCULOSIS ASSOCIATION

needs your help in the fight against Tuberculosis.

620 South Third St., Louisville, Ky.

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renee

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Louisville, Ky.

Proceedings of the
**SIXTEENTH ANNUAL MEETING OF THE
 WOMAN'S AUXILIARY**

to the
KENTUCKY STATE MEDICAL ASSOCIATION
 Held at

Louisville, Kentucky, October 3-6, 1938.

The Sixteenth Annual meeting of the Woman's Auxiliary to the Kentucky State Medical Association opened at 9:00 A. M., Monday, October 3, 1938, at the Brown Hotel, Louisville, Kentucky, with Registration.

Study Class

At 1:45 P. M., Monday, the Study Class was held in the Roof Garden, Mrs. H. V. Usher, Sedalia, presiding. 43 were present.

A talking film, entitled "Let My People Live," advising Negroes to take greater precautions against Tuberculosis, was shown by Dr. L. E. Smith, Louisville.

Three addresses were given and open discussion followed each subject. Mrs. E. H. Heller, Louisville, Commander of the Kentucky Unit of the Woman's Field Army for the Control of Cancer, told of the work of that organization in her talk entitled "The Most Valuable Thing in the World." Mrs. H. G. Reynolds, Paducah, endorsed the project and recommended that each Auxiliary member volunteer her services for Cancer Control Work. Dr. Clayton McCarty, Louisville, discussed the latest trend in Medical Economics. Dr. H. G. Reynolds, Paducah, President of the Kentucky State Medical Association, was detained at another meeting and could not make his scheduled talk. Mrs. Samuel H. Flowers, Louisville, Radio Chairman, announced that she had arranged for six interviews with prominent physicians over WHAS and WAVE.

Minutes of the Pre-Convention Board Meeting.

The Annual Pre-Convention Board Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was held in the Roof Garden of the Brown Hotel, Louisville, Kentucky,

at 3:50 P. M., Monday, October 3, 1938, with Mrs. Stephen C. McCoy, the President, Louisville, presiding. A quorum was present. (18 seated).

The Invocation was offered by Mrs. Luther Bach, Bellevue.

A motion carried that the reading of the minutes of the Mid-Year Board Meeting, held in Louisville, January 20, 1938, be dispensed with as these Minutes had been published in the Woman's Auxiliary Section of the Kentucky State Medical Journal for April, 1938.

Roll call was answered by 16 members.

The Nominating Committee was elected as follows:

Mrs. E. B. Houston, Murray, Calloway County, Chairman.

Mrs. V. A. Stilley, Benton, Marshall County.

Mrs. R. T. Layman, Elizabethtown, Hardin County.

Mrs. C. C. Howard, Glasgow, Sampson Community Hospital District.

Mrs. Walter I. Hume, Louisville, Jefferson County.

The Resolutions Committee was appointed by the President with Mrs. William H. Emrich, Louisville, Chairman. Other members were: Mrs. Curt H. Krieger, Louisville, and Mrs. John B. Floyd, Richmond.

Several Committee Reports were given in brief. Mrs. E. A. Barnes, Albany, discussed the advisability of changing the name of the J. N. McCormack Memorial Committee to the J. N. McCormack Fund. It was decided to bring the matter up again at the Post-Convention Board Meeting after discussing it with the Advisory Committee.

The President brought a recommendation to consider a fund to pay traveling expenses of the President. A motion by Mrs. George A. Hendon, Louisville, seconded by Mrs. Luther Bach to present the recommendation to the Resolutions Committee, carried.

Adjourned, 4:20 P. M.

(Miss) GRACE STROUD, Recording Secretary.

Clock Bread and French Brand Coffee

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KROGER-PIGGLY WIGGLY STORES

THE KROGER GROCERY AND BAKING CO.

PRESIDENT'S REPORT TO KENTUCKY STATE MEDICAL ASSOCIATION

The President, Mrs. Stephen C. McCoy, appeared before the House of Delegates in Annual Session at the Brown Hotel, Louisville, on Monday, October 3, 1938, at 3:35 P. M., and presented her report of the work of the Auxiliary for the past year.

Joint Session

Tuesday, October 4, at 9:00 A. M., in the Ball Room of the Brown Hotel, Louisville, the Woman's Auxiliary met jointly with the Kentucky State Medical Association for the Installation Ceremony of the President, Dr. William E. Gardner, Louisville.

MINUTES OF THE ANNUAL MEETING

First Session

The General Business Meeting of the Sixteenth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was called to order in Louisville in the Roof Garden of the Brown Hotel at 9:45 A. M., Tuesday, October 4, by the President, Mrs. Stephen C. McCoy, Louisville. A quorum was present. (34 members were seated at the opening of the session).

The singing of America was led by Mrs. J. Paul Keith, Louisville.

The Invocation was offered by Dr. Charles Prather, Pastor of the Bardstown Road Presbyterian Church, Louisville.

The Address of Welcome was given by Mrs. Philip E. Blackerby, Louisville.

The Response was made by Mrs. Luther Bach.

Greetings and Messages from the Kentucky State Medical Association were brought by H.

G. Reynolds, M. D., Paducah, Retiring President, and by Wm. E. Gardner, M. D., Louisville, newly installed President.

Roll Call showed 8 Officers, 11 Committee Chairmen, 4 County Presidents and 15 Delegates present.

The Report of the Committee on Arrangements was made by Mrs. J. Paul Keith.

The Report of the Committee on Credentials and Registration was made by Mrs. James S. Lutz, Louisville who announced 103 members registered.

Minutes of the Pre-Convention Board Meeting were read and accepted.

In the absence of the Parliamentarian, Mrs. E. B. Houston was appointed to fill the vacancy.

The President delivered her Report of the Administrative Office, with the First Vice-President, Mrs. J. B. Lukins, Louisville, in the Chair. The Report was adopted with thanks, upon motion by Mrs. George A. Hendon, seconded by Mrs. J. Paul Keith.

Reports of the following County Auxiliaries were made by the respective President or Delegate: Calloway, Campbell-Kenton, Graves, Hardin, Jefferson, Licking Valley District, Madison, Marshall, Sampson Community Hospital District.

Upon motion of Mrs. P. E. Blackerby, seconded by Mrs. J. B. Lukins, these Reports were received and filed. All Reports presented in writing will be published in the Quarterly.

Dr. A. T. McCormack, Louisville, a member of the Advisory Council, was presented and brought a message of encouragement and appreciation from the State Association and a request for the continued support of the Aux-

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BORNWASSER'S CAFETERIA

BREAKFAST — LUNCH — DINNER

312 West Broadway

Opposite Brown Hotel On Broadway

Louisville, Ky.

iliary to all the principles of that organization.

Mrs. Clifton Richards, Sampson Community Hospital District, asked for the cooperation of all County Auxiliaries in their anti-spitting campaign.

A motion by Mrs. V. A. Stille, seconded by Mrs. E. B. Houston, that the Secretary write to two valued members who are now shut-ins, Mrs. J. T. Reddick, Paducah, and Mrs. George Fuller, Mayfield, telling them that the Auxiliary members remember them at this time, carried.

After hearing a letter of regret from Mr. Barry Bingham, Owner of the Courier-Journal and Times for the loss of reserved seats at the Memorial Auditorium for the Address by Mrs. Franklin D. Roosevelt on Monday evening, Mrs. A. T. McCormack moved that a letter of appreciation, understanding and thanks be sent to Mr. Bingham. This motion was seconded by Mrs. Kenneth L. Stratton, Alexandria, and carried.

Recess

Informal Luncheon

An informal luncheon given with the compliments of the Jefferson County Medical Society was held in the Bluegrass Room of the Brown Hotel, at 12:30 P. M., Tuesday. Following the luncheon, Mr. O. B. Gardner, Louisville entertainer, gave imitations of well-known radio characters. The President, Mrs. Stephen C. McCoy, then presented Mrs. H. Gilbert Reynolds, who gave a vitally pertinent account of experiences, personalities and places she knew last year in Czechoslovakia. Her talk was entitled "What's the Matter With Us?"

Theatre Party

At 2:30 P. M., a theatre party for visiting members was held under the direction of Mrs. J. Duffy Hancock, Chairman of the Entertainment Committee.

Dedicatory Exercises

The Auxiliary was invited to attend the Buffet Dinner, 6:30 P. M., given by the Jefferson County Medical Society, and the exercises to dedicate the new home of the Kentucky State Medical Association and the State Board of Health of Kentucky as a Memorial to Joseph Nathaniel McCormack. Invocation was offered by Reverend Father James Pitt. Addresses were given by the Honorable Albert B. Chandler, Governor of Kentucky, Dr. C. C. Howard, Glasgow and Dr. A. T. McCormack, Louisville. Dr. J. Duffy Hancock, President of the Jeffers-

son County Medical Society, presided. With a most impressive ceremony a bronze plaque and a portrait in oils of Joseph Nathaniel McCormack were unveiled by his granddaughter, Miss Mary Tyler McCormack.

MINUTES OF THE ANNUAL MEETING

Second Session

The Second Session of the General Business Meeting of the Sixteenth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was held in the Roof Garden of the Brown Hotel, Louisville, at 9:30 A. M., Wednesday, October 5. The President, Mrs. Stephen C. McCoy, presided. A quorum was present. (36 members were seated at the beginning of the session).

The Minutes of the previous session were read and approved.

Reports of State Officers and Committee Chairmen were made, accepted and filed as follows:

President-Elect, Mrs. Harlan V. Usher.

First Vice-President and Chairman of Organization, Mrs. J. B. Lukins.

Corresponding Secretary, Mrs. Charles H. Moore.

Treasurer, Mrs. Luther Bach. Motion that the Treasurer's Report, together with the Report of the Auditor, be adopted, was made by Mrs.

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G. A. Hendon, seconded by Mrs. H. V. Usher; carried.

Archives, Miss Grace Stroud.

Cancer Control, Report read by Secretary.

Child Health and Welfare, Mrs. J. Paul Keith.

Doctor's Day, Mrs. J. B. Lukins.

Historical Collection, Mrs. V. A. Stillely.

Jane Todd Crawford Memorial, Mrs. A. T. McCormack, Louisville.

Joseph Nathaniel McCormack Memorial, Mrs. E. A. Barnes. A motion by Mrs. V. A. Stillely, seconded by Mrs. E. B. Houston, that a vote of thanks be given Mrs. Barnes for her efforts on behalf of this Memorial; carried.

Tuberculosis, Mrs. L. E. Smith, Louisville.

The Quarterly, Editor, Mrs. A. T. McCormack.

Business Manager, Mrs. Wm. H. Emrich.

Motion to adopt all the Reports was made by Mrs. E. B. Houston, seconded by Mrs. V. A. Stillely, carried.

The Report of the Delegate to the Annual Meeting of the Woman's Auxiliary to the American Medical Association, held in San Francisco, was presented by Mrs. Luther Bach. Accepted and filed.

The Report of the Annual Meeting of the Woman's Auxiliary to the Southern Medical Association, held in New Orleans, was given by Mrs. Richard T. Hudson, Louisville, Deputy Councillor, Accepted and filed.

The Report of the Resolutions Committee was presented by Mrs. William H. Emrich, Chairman, as follows:

RESOLUTIONS

Whereas, The Sixteenth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association will soon have completed a very successful and interesting meeting, and,

Whereas, The Jefferson County Medical Society and Woman's Auxiliary have so successfully worked and planned together with the Kentucky State Medical Association for our comfort and entertainment, and,

Whereas, The Brown Hotel has attended to

our needs and wants with courtesy and dispatch, and,

Whereas, The Courier-Journal and Times have been most generous in using photographs of our Officers and guests, and publishing accounts of our activities, and,

Whereas, Mrs. E. H. Heller, Rev. Chas. H. Prather, Mr. O. B. Carpenter, Mrs. H. G. Reynolds, Mrs. Chas. C. Tomlinson, Mrs. Luther Bach, gave their valuable time to appear on our program, Now, therefore

Be It Resolved: That we here gratefully express our sincere appreciation for all these courtesies extended to us at this meeting.

Whereas, The House of Delegates of the Kentucky State Medical Association has expressed confidence in our Auxiliary and has set aside the sum of \$500 to be used as a Contingent Fund for the Quarterly,

Now Therefore, Be It Resolved: That we express to them our gratitude and indebtedness for this consideration and encouragement.

Whereas, The J. N. McCormack Memorial initiated by Mrs. E. A. Barnes, President, at the Annual Meeting in Paducah, 1936, has developed and taken form in the new home of the Kentucky State Medical Association and the State Board of Health of Kentucky, under the effective leadership of a committee from the Kentucky State Medical Association, Dr C. C. Howard, Chairman, Now, therefore

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Be It Resolved: That the J. N. McCormack Memorial Committee of this organization be dissolved with congratulations and thanks to Mrs. Barnes, and that the Treasurer be instructed to pay over the sum of \$50.50 collected for this purpose, to the Special Committee of the Medical Association to help defray the expenses of the Bronze Plaque memorializing Dr. J. N. McCormack.

Whereas, The State Highway Department of Kentucky has aided in the development and beautification of the Jane Todd Crawford Trail during the past year, furnishing and placing suitable markers, transporting and planting bulbs, plants and seeds on the Trail, Now, therefore

Be It Resolved: That a letter of thanks and appreciation be written to the Commissioner, Honorable Robert O. Humphrey, with special commendation for the consideration and kindly helpfulness of Mr. Benjamin F. Buckner, Roadside Engineer, under whose supervision the work has been done.

Whereas, Expenses attending the administration of the President's Office are often difficult to meet, and,

Whereas, The County and District Auxiliaries frequently request the President and other Officers to visit them for consultation and advice, and,

Whereas, The President is expected to attend the Annual Meetings of the American Medical Auxiliary and of the Southern Medical Auxiliary, as well as the Annual Meeting of the State Auxiliary, Now, therefore

Be It Resolved: That the sum of \$100, to be known as the President's Discretionary Fund, be allowed, annually, for the use of the Presi-

dent in thus furthering the work of the Auxiliary.

Whereas, Our President, Mrs. S. C. McCoy, has worked unselfishly to promote greater efficiency, growth and development of our Auxiliary, and,

Whereas, The Officers of her Staff and Committee Chairman have cooperated in a most satisfactory manner. Now, therefore

Be It Resolved: That we now express our appreciation to Mrs. McCoy and her staff for their valuable services during the past year.

Respectfully submitted,

Mrs. Wm. H. Emrich, Chairman.

Mrs. John B. Floyd

Mrs. Curt H. Krieger

Motion by Mrs. A. T. McCormack seconded by Mrs. J. B. Lukins that the Resolutions be adopted, carried.

The Final Report of the Chairman of Registration and Credentials was given by Mrs. James S. Lutz and showed an attendance of 21 Delegates, 16 Officers and Committee Chairmen, 112 Members, making a grand total of 149 representing 37 Counties.

The Report of the Nominating Committee was presented by the Chairman, Mrs. E. B. Houston. Mrs. V. A. Stilley moved the election of the candidates; seconded by Mrs. Samuel H. Flowers, Louisville. Nominations from the floor were called for. None were offered.

Motion carried that the nominations be closed. A motion carried that the Secretary cast the ballot, whereupon the following were declared elected:

President-Elect, Mrs. Reason T. Layman, Elizabethtown, Hardin County.

1st Vice-President, Mrs. John M. Blades, Butler, Pendleton County.

2nd Vice-President, Mrs. Clifton Richards, Glasgow, Barren County.

3rd Vice-President, Mrs. L. S. Hays, Louisa, Lawrence County.

4th Vice-President, Mrs. John B. Floyd, Richmond, Madison County.

Recording Secretary, Miss Grace Stroud, Louisville, Jefferson County.

Treasurer, Mrs. Luther Bach, Bellevue, Campbell County.

Parliamentarian, Mrs. J. B. Shacklette, Jefferson County.

The newly elected officers were called to the platform and introduced by the President,



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ming a guard of honor as Mrs. Harlan V. Usher, the Incoming President, was installed. Mrs. E. B. Houston and presented the gavel to Mrs. Stephen C. McCoy. Following her Acceptance Address, Mrs. Usher announced that Corresponding Secretary will be Mrs. William T. Vaughn, Mayfield, Graves County. Adjourned sine die at 11:45 A. M.

MISS GRACE STROUD, Recording Secretary.

ANNUAL LUNCHEON

The Annual Luncheon of the Woman's Auxiliary to the Kentucky State Medical Association was held at 12:30 P. M., Wednesday, October 5, in the Bluegrass Room of the Brown Hotel, Louisville. Mrs. Stephen C. McCoy, hostess. This luncheon was given the members of the Auxiliary with the compliments of the Kentucky State Medical Association.

Honor Guests were National and Southern Auxiliary Presidents: Mrs. Charles C. Tomlinson, Omaha, Nebraska, President, American Medical Auxiliary; Mrs. Luther Bach, Bellevue, Kentucky, President, Southern Medical Auxiliary.

Dr. V. A. Stilley, Benton, the only member of the Advisory Board who could be present, commented the Auxiliary on its year's work and reported that the House of Delegates of the Kentucky State Medical Association had expressed confidence in our Auxiliary and had aside the sum of \$500 to be used as a Contribution Fund for the Quarterly.

Mrs. J. Paul Keith, Chairman of Arrangements, announced that cars were waiting to take visiting women to the Speed Museum, Lemon Antique Gallery and a lecture at the Kentuckiana Institute.

The music at this luncheon was accordian and was played as the women were being seated again at the close of the luncheon.

POST-CONVENTION BOARD MEETING
The Post-Convention Board Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was held in room 431,

Brown Hotel, at 2:30 P. M., Wednesday, the President, Mrs. Harlan V. Usher, presiding. A quorum was present. (12) members.

Invocation was offered by Mrs. V. A. Stilley.

In announcing her appointment of Committee Chairmen, the President asked that the Auxiliary consider combining several of the Committees in an effort to increase their usefulness. Mrs. E. A. Barnes moved that the Archives and Historical Collection Committees be combined and called Historian. The motion was seconded by Mrs. William H. Emrich and carried. Mrs. A. T. McCormack made a motion, seconded by Mrs. Luther Bach, that the Child Health and Welfare and Public Relations Committees be united and be known as the Public Relations Committee. Carried.

The appointment of Committee Chairmen was approved.

The program of work for the coming year was presented by the President under the title of Project for County Auxiliary Development. Following explanation and discussion, a motion to adopt by Mrs. E. A. Barnes seconded by Mrs. Luther Bach, carried. A motion by Mrs. K. L. Stratton seconded by Mrs. Stephen C. McCoy, that a ribbon be awarded the County making largest number of points, carried. A motion by Mrs. A. T. McCormack seconded by Mrs. K. L. Stratton, that Mrs. Stephen C. McCoy be appointed Program Chairman, carried.

A motion by Mrs. A. T. McCormack seconded by Mrs. E. A. Barnes, carried, that the Public Relations Chairman confer with Dr. H. G. Reynolds on a project to assist in a campaign for the Prevention of Blindness and report at the Mid-Year Board Meeting. A motion by Mrs.

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John M. Blades seconded by Mrs. P. E. Blackerby, that \$10.00 be appropriated to buy a sign for the Doctor's Shop was laid on the table until the Mid-Year Board Meeting. Carried.

A motion by Mrs. A. T. McCormack seconded by Mrs. Stephen C. McCoy that Mrs. John M. Blades be appointed to discuss the buying of the sign with the Doctor's Shop Chairman, Mrs. J. B. Lukins, carried.

Adjourned 3:30 P. M.

(Miss) GRACE STROUD, Recording Secretary.

PRESIDENT'S REPORT

It is with the greatest of pleasure that I welcome the Officers, Chairmen, Delegates, Members and Guests to this Convention and offer congratulations for the number in attendance. Many of you have come from a distance which shows your real interest in this worthwhile work.

To those who are not members—we are especially glad to have you with us, hoping you will become interested in the work and want to join us.

When I accepted the State Presidency of our Auxiliary for 1937-1938 I realized that without the support and cooperation of each County President and every member in the Organization, it would not be a success; but you have been loyal and cooperative. Therefore, we have done some valuable work.

Following the Annual Meeting in Richmond, September 1937, a copy of "Our Aims" was mailed to each County President, that it might be read at their first county meeting. This information was also brought to the members of the State-at-large through our October issue of "The Quarterly."

Our first Mid-Year Executive Board Meeting was held in the Brown Hotel, Louisville,

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January 20th, 1938, with good attendance (17 present) and splendid reports. Activity among the fourteen Committees has been gratifying on the whole. Results, more apparent in some than in others, will be presented to you in detail by their respective Chairmen, however a brief summary may be helpful:

Archives—Miss Grace Stroud, Chairman.

The collection of Auxiliary records and news items continues, and a fine exhibit sent to the National meeting in San Francisco, California, June 1938, was prepared with the cooperation of the Sewing Unit and the Study Class of Jefferson County.

Cancer—Mrs. J. Duffy Hancock, Chairman.

Cancer study and education has made tremendous strides this last year in Kentucky as "we fight cancer with knowledge." Our Chairman continues her cancer message in The Quarterly.

Working through our various Clubs, many Auxiliary members are active in the Woman's Field Army under the leadership of Mrs. E. H. Heller, a former President of the State Federation of Women's Clubs.

Child Health—Mrs. J. Paul Keith, Chairman.

Recommendations that two helpful references, Child Study and Parents' Magazine, be introduced to members, were sent to each County President. Increasing use of these magazines is reported. The Child Health and Welfare page in the Quarterly continues.

Doctor's Shop—Mrs. J. B. Lukins, Chairman.

The housekeeping and furnishings of this building show awareness of needs.

Collection of suitable antiques continues, slowly. More active interest is requested.

Historical Collection—Mrs. V. A. Stilley, Chm.

I am happy to report remarkable advance in this work. W. P. A. made Medical History Collections one of its projects in September 1937, with Miss Louise Morel, Honorary Member of Jefferson County Auxiliary, supervising the detail research. Forty paid workers are employed at the present time, with offices at the State Health Department.

Hygeia—Mrs. C. C. Turner, Chairman.

This Committee has not received the support it deserves, much to my regret.

The Chairman has made valiant effort and is commended for her attempts to make us all, each one of us, not only subscribe for Hygeia ourselves, but also secure additional subscriptions in response to the only request the American Medi-

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cal Association has ever yet made of the Woman's Auxiliary.

Jane Todd Crawford—Mrs. A. T. McCormack. Markers have been placed on the Trail and beautification is progressing with spring and autumn planting generously aided by numerous friends and the State Highway Department.

Increasing numbers of books have been sent to the Jane Todd Crawford Library which became a W. P. A. project on February 7th, 1938, with a trained librarian, Miss Hattie Davenport, in charge.

More active interest in Jane Todd Crawford Memorial has developed in the Southern States.

Jane Todd Crawford Day was observed by increasing numbers and in more varied ways.

Slow growth is reported in our One Thousand Dollar Memorial Fund, which we hope to pay, as pledged, to the Southern Medical Association in honor of our Kentucky President, Mrs. Luther Bach.

Legislation—Mrs. Eleanor Hume Offutt, Chm. Little activity has been required in Legislation.

Organization—Mrs. J. B. Lukins, Chairman.

This Committee has not received the support it deserves, much to my regret.

Letters and appeals go unheeded. What can be done to increase our membership? This is a question that concerns each member.

Public Relations—Mrs. George Hendon, Chin.

Reports from the Counties on Public Relations Activities appear difficult to secure. The National drive for Cancer education conducted by the Woman's Field Army last April was assisted by the wives of many physicians.

In Jefferson County, a series of four lectures by physicians, followed by questions and answers, was arranged by the Study Class, Mrs. Jos. E. Wier, Chairman, and the Committee on Public Relations. The meetings were held at the Brown Hotel with an average attendance of 154, representing all organized women's clubs in Louisville. Several physicians attended these meetings.

Radio—Mrs. S. H. Flowers, Chairman.

Beside the regular programs by Jefferson County outstanding work on the Radio includes two unusual programs over WAVE—a dramatization of the Jane Todd Crawford story on Jane Crawford Day, December 13th, and biographical sketches called "Doctors of Yesterday and



Today," in observance of Doctor's Day, on May 14th.

Tuberculosis—Mrs. L. E. Smith, Chairman.

The Tuberculosis page in the Quarterly has been continued. More Auxiliary members are serving in the Christmas Seal Sale.

The Quarterly.

The Quarterly has completed seven years of publication with this October issue off the press. I wonder if we members realize the very real confidence in us expressed and demonstrated by the Kentucky State Medical Association when that body of serious men requested us to undertake the publication of a supplement to their own Medical Journal?

The reports of the Editor and Business Manager will give you the detail of this work. Your special attention is directed to a thoughtful study of the Audit contained in this last issue. (October)

In April I attended a luncheon meeting of the Hardin County Auxiliary in the Taylor Hotel, Elizabethtown. I was delighted with the interest shown in the work. It is my belief that some provision should be made for more frequent visits to the County Auxiliaries, by the State President and other Officers.

I attended the meeting of the Auxiliary to the Southern Medical Association in New Orleans, November 30th-December 3rd, 1937. This meeting was a real inspiration to me and gave a much broader view of what the Auxiliary means to the Medical Profession. At present, we have twelve Auxiliaries representing thirty-four counties.

Members of the State-at-Large.....	13
Honorary Members	4
Active Members (dues paid)	267
Associate Members	4
Deceased Members	0

Grand Total.....288

How chic your travelling costume from renee! Now—to Mimi's, for your new hairdo!

To each Member of the Executive Board and to every Auxiliary member, I wish to say with deep earnestness, thank you for all that you have done for the Kentucky Medical Association and for the Woman's Auxiliary during my year of service as your President. It has been a glorious experience to serve with you.

Your continuing service and loyalty will bring joy to the heart of our in-coming President, Mrs. Usher, along with constructive progress for our Organization.

Respectfully submitted,

(Mrs. Stephen C.) Mary Mathilda McCoy,
President.

TREASURER'S REPORT

Total receipts for the year..	\$ 125.84
Total disbursements	\$ 93.08
Collection over operation cost	32.76
Balance on hand in Campbell County Bank	\$ 140.57
Amount received since August, 1938	32.00
Amount disbursed since August, 1938	13.59
Balance on hand	\$ 158.98
Savings Account in Louisville Trust Co.	64.45
Jane Todd Crawford Fund August, 1938	774.13
Amount received since that time	70.00
Total in Jane Todd Crawford Fund	\$ 844.13
Amount in Joseph Nathaniel McCormack Fund	\$ 50.50
Total assets at present....	\$1,118.06

Your attention is called to the Audit, published in the October, 1938 issue of the Quarterly, giving all income and outgo of funds.

Respectfully submitted,
MRS. LUTHER BACH, Treasurer.

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REPORT OF PRESIDENT-ELECT

As your President-Elect the past year, it has been my great privilege to enjoy the confidence, of our beloved President, Mrs. Stephen C. McCoy. I have tried to merit that confidence. I have at no time made any move without her approval.

I attended the Mid-Year Board Meeting in Louisville, on January 20, 1938, where we heard reports read from the Counties, made plans for the Exhibits for the National Auxiliary in San Francisco.

After the Luncheon, at Brown Hotel, par-

taken by seventeen members of the Board, I invited a Committee into my room to make out a Program for the State Medical Auxiliary Convention to be held in Louisville October 3rd-6th, 1938.

Shortly after my arrival home from this Meeting I began by correspondence, which I heartily enjoyed, to obtain speakers for this Program. This has been my chief work. At the same time, I have carried on some programs on Health Education, being Public Relations Chairman in my County Auxiliary. The year of preparation for the office of President is one full of opportunity, and is a wonderful period of training for that office.

May I again express my appreciation for kindness, and interest manifested in my behalf by Mrs. McCoy, Miss Stroud, the Recording Secretary, Mrs. McCormack and other members of the Executive Board? It has been a privilege to work with them.

Respectfully submitted,

(Mrs. H. V.) TREVA JONES USHER.

(Proceedings continued p. 22)

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Medical science is striving for specific cures, and with equal effort is searching for positive methods in preventing disease. Prevention and control of communicable disease means the employment of both active and passive immunization of the individual. The cooperation of parents is the essential element in the control of communicable diseases.

Every child should be successfully vaccinated against small-pox, the sooner the better, preferably two weeks after delivery, after the cord has fallen off. Every child should be actively immunized against diphtheria if the Schick test is positive after the first year. In certain localities, all children should be immunized against typhoid fever. All exposed or suspected children should have tuberculin tests at any age. Persons exposed to rabies should be given the anti-rabic treatment. All individuals with positive Dick test should be immunized against scarlet fever after eighteen months of age. Children should be protected against whooping cough and those exposed to measles should be given immune globulin.

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The arrival of a brand-new baby in the home is a time when the center of attention is changed from everything else to the new arrival which becomes the ruler in the home, or "the one in authority."

The love of the family for him and his utter helplessness makes him so. This is well and good. The only necessity is to never allow him to find it out. As soon as he does, you may have the beginning of a spoiled child. I do not mean that he is not to feel and know your love for him. But for him to realize that by maneuvering just right he can bring everyone to his way of thinking makes the spoiled child and—a later problem.

Establishing regular habits is the only way to rightly deal with the baby—it is something that will bless him all his life. Have his feeding on time and if correctly fed satisfaction results.

There are almost unnumbered reliable sources of knowledge today through which the young mother may learn just how physically to care for her babies. I want to give the young mother, or the mother of a young baby, a very special word. It is this:

Begin from the very first to be quiet with your baby. I do not mean to keep all noise down—you cannot do that if you try. No, I mean to possess yourself with a quiet controlled spirit and do not try to amuse him or have him amused all the time. Never allow anyone to disturb him when asleep and seldom if he is lying quietly entertaining himself, which he will early learn to do if he isn't continually entertained by someone else. If they are kept dry and sweet and clean, which is every baby's right, then not over-stimulated with attention, if well, they will drop off to sleep in a natural way in the day time and at night.

You surely will not understand me to mean they are never to have the love-attention it would be impossible to withhold. Such love-attention should be given not only to the baby but to the older one who often times is pushed into the background. No, we cannot love our children of any age too much. We can indulge them too much but we can not love them too much.

Their schedule should be arranged so that they have a wakeful time, preferably in the open air, just before being tucked in for the night. If you nurse your babies, insist on yourself relaxing while so doing. Relax, for

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your baby's sake as well as your own. A nervous, hurried, flurried mother makes a cross baby. Leisurely enjoy your baby while you feed him—talk to Jesus and allow Him to talk to you. Have something devotional to read—leaflet or small Testament—something that takes no effort to hold. An absolute faith in our God for the large and small things in life is the best cure for nervousness.

If yours is a bottle-baby take time to sit down with him just the same during feeding time.

It isn't always easy to take your mind entirely, for twenty minutes to half an hour, from the many other things clamoring for attention. But, if you will do it, it rests you and, because you are relaxed and resting, your baby goes to sleep easier and sleeps longer, giving you more time for your work.

The following verses, reveal how mixed with everything else our lullabies can be:

Mother's Lullaby

Hush my little darling,
Close thine eyes and sleep
(Must get at those stockings
Piled ten inches deep.)

Rosy Angels hover
Round each drowsy dream,
(Write the milkman's notice for
An extra pint of cream.)

Baby stars in Heaven
Smile upon my sweet.
(Haven't called the laundry
About that missing sheet.)

Warm my heart will hold thee,
'Till the morning light,
(Hope he will let me get
Some sleep myself tonight.)

—Selected from Talk by Mrs. Jennie Mae Barnes

W. P. A. COLLECTING KENTUCKY MEDICAL HISTORY*

Miss Louise C. Morel, Louisville.

The State-wide research on Medical History, begun a year ago, has demonstrated its need and its work. The members of the Woman's Medical Auxiliary had made quite a contribution and we hope will continue to add to this fast growing project. Many old letters have been brought to life revealing heretofore unknown medical facts and legends of great interest. The biographies of hundreds of members of the medical profession in Kentucky have been recorded, some of which go back well into the eighteenth century. Some of the figures with which these biographies deal were outstanding; some had long been forgotten, but all made worth while contributions to the advancement of medicine and to general welfare.

Your help is most earnestly enlisted, for there are counties in which there are no workers available, and we will have to depend on volunteer help. It is from these corners that we may unearth very valuable history now unpublished. We will need your help to clean up mistakes that have crept into our history. There is no better field for gathering this present day history than through the Woman's Medical Auxiliary.

This work when completed will constitute a compendium of every thing that is known of the growth of medical aid and public health in Kentucky from its earliest incidence to the present day.

The State Board of Health and the Kentucky State Medical Association are sponsoring this work for Kentucky. There is no question as to the value of this work now, and for generations to come.

Below is a guide for obtaining information to be later rewritten in narrative form.

Send your contribution to Miss Louise C.

A GUIDE FOR INTERVIEWS ON MEDICAL AND DENTAL HISTORY

(Research Worker to re-write in narrative form)

Name: Date:
Place of Birth:
Parents:
Lineage:
Married: (When)
 (Po Whom)
Children:
Education:
 School:
 College:
 University: Year Grad:
Post Graduate Work:
Internship:
Practiced:—Where and When:
General Practice or Specialty:
War Service:
Membership in Medical or Dental Organization:
Church Affiliation:
Social Organizations:
Contributions to Medical or Dental Literature:
Remarks:

Morel, State Board of Health 620 South Third Street, Louisville, Kentucky.

Do not overlook doctors in your own family. They may prove most valuable links in the chain of events.

*See Editorial, p. 19.

THE GROWTH OF MEDICAL AID and

PUBLIC HEALTH SERVICE IN KENTUCKY

Just a few outstanding facts gleaned last Spring:

1770—The History of Medicine in Kentucky centers around Transylvania University, before Kentucky became a State.

1777—The first teacher of medicine gave instruction.

1799—The Medical Department of Transylvania was organized.

1802—Vaccination for smallpox was used even earlier. (Dr. Samuel Brown).

1806—The first hip amputation was done in Kentucky. (Dr. Walter Brashear).

1809—A woman in Kentucky was the first in the world to undergo the operation for the removal of an Ovarian tumor and without an anesthetic—thus bringing world renown to one of our earlier doctors. (Dr. Ephraim McDowell).

1852—The Caesarian Section was done in Kentucky in Springfield, by a physician only 25 years of age. (Dr. Francis E. Polin.)

1875—The State Board of Health was created to take care of the emergency of an epidemic of yellow fever.

1883—An epidemic of cholera occurred.

1885—The first sanitary survey for clean, pure water was made by our own State Health officer, (Dr. J. N. McCormack).

1898—The first County Health Department in the United States was organized in Kentucky. (Jefferson).

Such facts as the above are being collected by W. P. A. Research Workers in various counties in Kentucky.

WHAT CAN YOU CONTRIBUTE TO THIS GREAT MEDICAL HISTORY?

You may know of valuable material found in old letters and records tucked away in attics and elsewhere. If so, please communicate with Miss Louise C. Morel, State Board of Health, 620 So. Third Street, Louisville, Kentucky.

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-:- EDITORIALS -:-

THE CORNELIAS AND THE ISABELLAS

Listen!

Cornelias! Isabellas!
The Kentucky Cardinal sings
Greetings to you
And to all you hold dear
This eighth New Year!

The eighth New Year for publication of this Quarterly! Is it possible? Yes. Time has winged its way from Depression to Recession, Drouth to Flood, with the Quarterly sometimes struggling for life, yet, off the press every three months, and with bills all paid, to date.

And—facing 1939, we find ourselves fortified by encouraging, enthusiastic approval from the House of Delegates of the Kentucky State Medical Association with the substantial evidence of the allotment of a fund of \$500.00 for the use of the Quarterly, should need require it. Thank you, Members of the House of Delegates, and, our thanks to you, Members of the Kentucky State Medical Association, speaking through your House of Delegates. We appreciate your generous action.

Too, we appreciate your approval of the suggestion that we add an Advertising Manager to our Staff. And—we are happy to announce that a Member of Jefferson County Auxiliary, Mrs. Joseph E. Wier, is filling this office with gratifying success.

The task of financing the Quarterly is more than the few volunteers could continue to do alone. Several of them, however, continuing their Isabella role, have aided in securing the 1939 Advertising Contracts.

Look in the Index (October issues) and, each year, you will find new names among the Cornelias, those gifted Members, who on these pages, liberally share with us their "Brain Children"—worth more to the Editor than jewel or gem of the precious stone variety. The Cornelias are sending in their contributions of news, special features and other reading matter, more punctually and in more readily available form each year.

Numerous Auxiliary friends in other States and several physicians, members of the Kentucky State Medical Association, have generously contributed to our pages, also. Our sincere thanks are extended to each one of our contributors.

With Nineteen Thirty Eight a bygone date—
Listen!

The Cardinal sings, early and late:
Good Cheer! Good Cheer!
Good Times Are Here.
Let's buckle and gear
To excel this year!

Cornelia And Her Jewels



When the rich Roman Matron boastfully displayed her rare jewels, Cornelia, the Mother of The Gracchi, drew her sons to her side and replied "These are my jewels."

CORNELIA AND HER JEWELS

By Schopin

Schopin, Henry Frederic, painter was born at Lubeck, of French parents, in 1804. He studied in Paris under Gros, and gained the 'prix de Rome,' in 1830. He was several times premiated and was a constant exhibitor at the Salon from 1830 onwards. He died in 1880.

(Copied from p. 48, vol. 5, Bryant's Dictionary of Painters and Engravers.)

THE MEDICAL HISTORY OF KENTUCKY*

The written record of medical history in Kentucky seems more nearly a dream come true, today, than ever before.

When the Auxiliary, in 1927, first began its work in the collection of medical history, emphasizing the biographies of physicians, both the pioneers and those of later date, no one visualized the possibilities now unfolding under the W. P. A.

The first eager efforts of the few Auxiliary members determined to start the development of a written record of Kentucky's medical history have merged into the State-wide research, begun a year ago by W. P. A. under Mr. G. W. Hubley, Director, and Miss Louise Morel, Supervisor. Just recently Mr. E. A. Jonas, scholar and nationally known newspaper man—formerly editor of The Louisville Herald-Post—has been secured to edit the findings and he is capably weaving together these meagre ravellings with the frazzle ends of almost lost medical facts of Kentucky. And—we are assured, the medical history of Kentucky will be written, eventually!

History should be facts.

Studying history, we are seeking His-Story. We confidently expect history to be his-tory, a record of facts. Too often, we find it coin-

posed of the three F's: Fancy, Fiction, Falsehood. History should be facts. Under the guidance of Miss Morel and Mr. Jonas we confidently hope for His-Story of Kentucky's Medical History in the not-too-far-distant future.

*See p. 18.

WIVES OF JEWISH DOCTORS IN GERMANY

The wives of Jewish doctors in Germany, in fact all Jews in Germany, have our sympathy. Their plight is deplorable—unbelievable, in this age. We want to help them. But, how can we help them?

"Pray for us," writes one. "Only God can help us."

This seems but little to do—yet, is it not the most powerful of all things that we can do—we women of faith in the Great Jehovah? To be sure, faith without works profits little. But—where there is true faith, guidance is given for works. And—our action, if deemed worthy, will, eventually be made plain to us.

Here is a paragraph worthy of earnest thought. It is from the book, "The Mortal Storm" by Phyllis Bottome. Johann Roth, the Jewish doctor, winner of the Nobel prize for Medical Research, speaks to his son.

"You are now twelve years old. It is the coming of age of a Jewish boy. You remember Jesus Christ left his parents then to talk to the heads of the Jewish race. I have sometimes wondered if the persecution of the Jews by Europeans is not a revenge because one of our sons has given them a religion they wished to accept and have failed to practice.

"It is a very dangerous thing to have an idea which you will not practice. . . . All persecution is a sign of fear; for if we did not fear the power of an opinion different from our own, we should not mind others holding it. Truth is its own defense. If the Nazis should kill me, for instance, although I do not think for a moment they will (but they did) such an affair would have its good side! When you had recovered from the natural grief of no

SOME KENTUCKY CORNELIAS AT WORK IN McCORMACK HOME

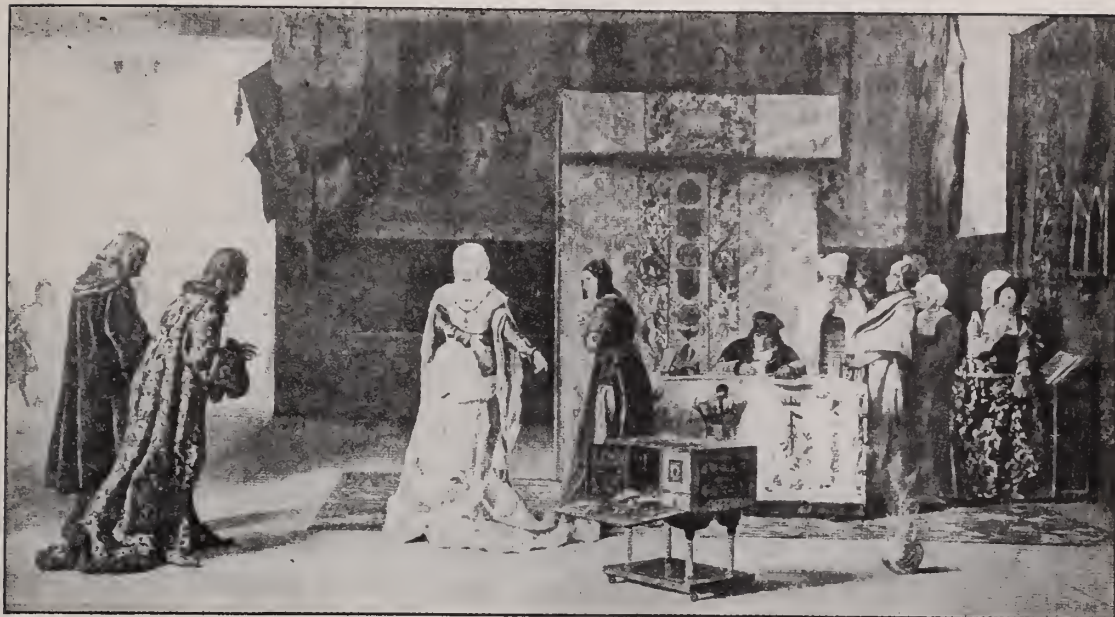


Dressing the "brain children" for public appearance!

Photo by Cusick

Left to right, front row: Mrs. John C. Rogers; Mrs. L. E. Smith. Back row: Mrs. S. H. Flowers; Mrs. J. E. Wier; Mrs. S. C. McCoy; Miss Grace Stroud; Mrs. A. T. McCormack; Mrs. W. H. Emrich Mrs. J. B. Lukins; Mrs. L. J. Hackett.

Columbus At the Court of Ferdinand and Isabella in Spain



Painting by Antonio Munoz Degrain, 1877, hanging in Senate Chamber, Madrid.
Queen Isabella offers her jewels to finance the "visionary adventure" of Christopher Columbus, resulting in the discovery of America, October 12, 1492

longer having your father with you, you would see that no great disaster had taken place. On the contrary, I should have done the Nazis a bad turn and they would have done my beliefs a good one.

"That a Jew is despised or persecuted is bad for him, of course—but far worse for the Christian who does it—for although persecuted he can remain a good Jew—whereas no Christian who persecutes can possibly remain—if he ever was one—a good Christian."

OUR PLEDGE PAID

Our pledge of One Thousand Dollars for the joint memorial of the Southern Medical Auxiliary to Jane Todd Crawford, Pioneer Heroine of Surgery, was paid November 16, 1938, in Oklahoma City.

Mrs. H. V. Usher, our gracious State Auxiliary President, with a few appropriate remarks, made the presentation, honoring at the same time, another Kentucky woman, Mrs. Luther Bach, the presiding officer of the Southern Medical Auxiliary who concluded her administration in Oklahoma City.

This fund of one thousand dollars is the accumulation of the past ten years of voluntary contributions, mostly in small amounts of one dollar, from Auxiliary Members and their friends.

Kentucky is happy to demonstrate pride in her citizen-of-long-ago through these active citizens of today.

AT THE SOUTHERN

The Oklahoma City Meeting of the Southern Medical Auxiliary, held November 15-18, 1938, will be long remembered as one of the most outstanding of all Southern Medical Auxiliary Meetings.

Oklahoma City was so genuinely hospitable.

Perfect weather was the back-drop for an interesting stage filled with happy, generous people who played "Mine Host" in perfect accord—from the smiling, chatty taxi driver at the station to the dignified Mayor, with all the doctors, their wives and friends extending open arms of welcome in their homes, clubs, hotels, theatres and shops.

Another reason why Kentuckians will long remember Oklahoma City is because so many of them played important parts in the proceedings: Mrs. Bach, the President; Miss Grace Stroud, Recording Secretary; Mrs. E. A. Barnes, Councilor; Mrs. Usher, State President, presenting Kentucky's gifts; and two of the guest speakers—Dr. Irvin Abell, President, American Medical Association; Dr. A. T. McCormack, there elected first President-Elect, Southern Medical Association.

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OUR BUSINESS

Mrs. Wm. H. Emrich.

Look through the pages of this brand new Quarterly and see for yourselves, how many real friends we have! There are FIFTY-THREE enterprising business firms marching with us triumphantly through another year. We thank them for their faith in us, demonstrated with such evidence. We believe this splendid array of advertisements is a test of their confidence in our publication.

Ambitious plans have been laid by the Quarterly Staff for a successful year; these plans will materialize if our Auxiliary women will insist upon PERFORMANCE rather than generous promises. Let these Advertisements guide you and your families when buying; tell our Advertisers "We saw your ad in the Quarterly"—it requires no effort, just a little forethought. With your help and the prospect of business and industrial peace "just around the corner," this should be a truly Happy New Year. And now—at the dawn of this bright new year, we again, say Thank you and extend our cordial good wish for a Prosperous, Healthy, Happy New Year to our Advertisers old and new.

PROCEEDINGS

(Continued From Page 15)

INAUGURAL ADDRESS

Mrs. H. V. Usher, Sedalia.

As I accept this gavel, the symbol of authority vested in the President of the Woman's Auxiliary to the Kentucky State Medical Association and the honors of this office, I am not unmindful of the fact that it is also significant of a great responsibility. As I accept this honor, and assume this responsibility, it is my full determination to perform to the very best of my ability the duties that fall within the jurisdiction of this office. Madam President, my work under your administration has indeed been a pleasure.

As you retire from this office which you have carried on with so much efficiency, permit me to congratulate you and wish you the very best results in whatever field your labors may lead you.

It is with deep appreciation of the honor conferred upon me and of the duties now mine, that I follow Mrs. McCoy as your President, with this my first message to you.

We now find ourselves with new Officers,

SOME KENTUCKY ISABELLAS AT WORK IN EMRICH HOME



Photo by H. Heese

Polishing the "jewels" in Financing Campaign for publication of the "brain children" that make the Quarterly!

Left to right: Mrs. Wm. H. Emrich; Mrs. A. T. McCormack; Mrs. S. H. Flowers; Mrs. Sidney J. Meyers; Mrs. S. C. McCoy; Miss Grace Stroud; Mrs. George A. Hendon.

facing a new year; an unknown year of possibilities; a year that lies before us to shape and mold to our purposes; a year of which we know nothing, except the attitude of mind, of heart and of spirit, with which we face it.

There is much to be done during this New Year. What will we do with our opportunities?

The ensuing year can be one of hesitancy and uncertainty of action, or it can be one in which definite purpose and united effort bring a great measure of progress. This purposeful effort is our definite aim.

I earnestly solicit the active cooperation of every member of this Auxiliary. The President and Officers can not carry all the load. But, if all will help, this sharing divides the load, lightens the burden, and multiplies the joys of life.

I am sure that we all want a part in this work and wish to keep this Auxiliary measuring up to a high standard, keep it really meaning and doing all the high ideals for which it stands. We want to know each other better, and continue to have a growing fellowship. Each of us, in common, has the same life to live rendering service to human needs. A Physician's wife if she deserves the name is one whose life is consecrated to service. The word Service has a charm and is a challenge for thinking people of this age. We no longer ask individuals about their ancestors. We want to know about their accomplishments. The world is no longer interested in how much you know, but is tremendously concerned about what you can do for humanity, and whether you are willing to do it or not.

We, as Doctors' wives, can fight our battles, and fight them bravely, but, so quietly that the world will not herald our deeds. We expect to pass through this world but once. Therefore any good that we can do, any kindness that we can show to our fellow creature, let us do it now; let us not defer it; for we shall not pass this way again. Days are each divine, they come and go like muffled and veiled figures. They say nothing; but if we do not use the gifts they bring, they carry them as silently away. So, let us use these opportunities that come our way; grasp them while in our reach, and mold them to our purposes for the glory of God and the good of mankind.

It is said that the great aim of life is not knowledge, but is action. So, let us get to work on our projects NOW and not wait until

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the year is almost passed; for we all know that an early start in our work means headway gained.

Victories which are worth while have come as results of hard fighting. Faith, love and service are our weapons of warfare. Then let us be ready girded for this warfare and ready to start the new year with courage and determination to accomplish the much needed work that lies before us to be done. So many Counties yet to be organized, so many Doctors' wives, mothers, and daughters who are not members of our Auxiliary, so many people around us who do not know how to protect themselves and their families against the diseases of our country, against which our Nation is waging such a fight.

I may not be able to accomplish as much as some of my predecessors have done: for all men cannot be the best; but every man or every woman can be his or her best.

With Divine guidance I again pledge you my best. May we as an organization and may me as individuals work onward, and upward and may the blessings of The Most High, soothe your cares, clear your visions, and crown your labors with reward.

ANNUAL REPORT OF

THE JANE TODD CRAWFORD MEMORIAL COMMITTEE

The past year shows some tangible evidence of work on the Jane Todd Crawford Memorial Projects.

The Annual Report of the Chairmen of the Southern Medical Auxiliary, Mrs. T. R. W. Wilson, Greenville, South Carolina, gave new impetus and interest to the work in that organization, along with her fine publication, entitled, "Jane Todd Crawford—1763-1842." It is gratifying to note, too, that North Carolina and Virginia sent donations to the Treasurer, adding \$30.00 to the joint fund started by Oklahoma. Kentucky has not yet contributed to this joint fund but intends to do so this year.

Alabama has established a Student Loan Fund, known as "The Alabama Jane Todd Crawford Memorial Fund" and South Caro-

No acidosis this trip! Imorde's basket of fruit will eliminate that!

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lina, a "Jane Todd Crawford Memorial Hospital Bed," thereby complying with the Third and the Fifth of the five suggestions of Mrs. Wilson for State Memorials to Jane Todd Crawford, contained in her booklet.

Jane Todd Crawford Day, December 13th was observed by more Auxiliary Members this year, in other States as well as in Kentucky. And, in more different ways! Collections of books for the Jane Todd Crawford Library in Greensburg, is one of the most popular observances by Kentucky Auxiliaries. It is gratifying to know, too, the remarkable growth and development of the Jane Todd Crawford Library in Greensburg. Organized with plenty of faith but little or no capital, November 1932, by the Greensburg Woman's Club at the oldest County Court House west of the Alleghanies, this Library was supported and managed entirely by the few members of the Woman's Club. To this Library, donations of books have been made by the Auxiliary each year. Then, on February 7, 1938, The W. P. A. assumed responsibility and, with an energetic trained Librarian, in charge, Miss Hattie B. Davenport, has developed it into a successful Pack Horse Library (without the horses, as women workers carry the books to folks too distant to come to the Library regularly.) Circulation has increased greatly. And, the number of volumes jumped from 500, February 1st to 2,300.

Outstanding, perhaps, as a Jane Todd Crawford Day observance, was the Radio Dramatization, prepared and presented by Mrs. Samuel H. Flowers, State Chairman of Radio, over WAVE, Louisville. Vividly realistic, this radio program made a deep impression on all listeners, Monday, December 13th. It is published in full in the October issue of The Quarterly, and it is hoped that many will use this graphic presentation in programs for club or school or Auxiliary. A brief Memorial Address was made over WHAS, also, by Mrs. Flowers.

Trail Markers were placed on the Jane Todd Crawford Trail in January, 1937, by the State Highway Department. To Honorable Robert O. Humphrey, State Highway Commissioner we owe a deep debt of gratitude for this generous cooperation. The Highway Department not only furnished the markers—but, also, placed them for us, all along the Trail from the Jane Todd Crawford Farm in Green County to the McDowell Home in Danville. I regret to report that vandals have removed some of these Markers but Mr. Humphrey has indicated that they may be restored.

Planting on the Trail last autumn was done by the Jessietown School, Lebanon. Spring planting, our first Trail-long effort, is recorded in the July issue of The Quarterly.

Autumn planting this year was begun, September 12th, with 30 bushels of IRIS, 24 bushels contributed by the Woman's City Club, Louisville, and a lot of peonies and other plants. This work is continuing and a more detailed report will be available in a later issue of The Quarterly. Here, again, the State Highway Department is cooperating generously. Under direction of the Commissioner and the Roadside Engineer, Mr. Benjamin Buckner, nursery men with a truck and tools have collected the plants where we have had them concentrated, transported them to the Trail and planted them.

The flower seeds, so generously contributed last season, have been planted, mostly by home owners and by school children: successful results in some instances; disappointments in others. But, a beginning made! Here, too, the Highway Department aided us in isolated places.

We do want more flower seeds, bulbs, plants and shrubs for next year's planting and will appreciate your contributions from your own and from your friends' gardens.

Arbor Day, this coming November, as well as next Spring, will, we hope, be observed by many people along the Trail.

Essayists, in school and college, are increasingly, finding the subject of Jane Todd Crawford appealing. One especially good essay that came to my attention was written by Miss Ewing Arnn, a Junior at Atherton Girls High School, Louisville. Miss Arnn is a niece of the late Dr. Jethra Hancock, one of the early ardent supporters of the Jane Todd Crawford Memorial Projects, and the one who first suggested the naming of the Trail.

Our Memorial Fund, which we hope to pay over at the Oklahoma City meeting in honor of Mrs. Bach to the Southern Medical Auxiliary for the joint memorial of the Southern States, has grown some, this last year. But, it is not yet complete. However, we hope to have the full \$1,000.00 before November 15th arrives.

Respectfully submitted,

(Mrs. Arthur T.) Jane Teare McCormack,
Chairman.

Going places? Tripping thru the Quarterly, just stop and marvel at our Ads!

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MEDICAL ECONOMICS

A Course by the Study Class of the Woman's Auxiliary to the Jefferson
County Medical Society

Mrs. Joseph E. Wier, Louisville, Chairman.

STUDY CLASS, AUTUMN PROGRAM

In December, the Study Class of Jefferson County, concluded a year's study of Medical Economics.

Our fall program was opened October 10, by Dr. Herman Mahaffey discussing Compulsory Health Insurance as he saw it in operation in Austria. Mr. T. Lane Tyne gave a short talk on the Community Hospital Insurance inaugurated in Louisville the past year.

November 7th, an interesting panel discussion was given by Major Bouterse, of the Salvation Army; Miss Mathilda Matheson, Director of Social Agencies, City Hospital; Miss Anna Haines, Executive, Louisville Health Council; W. O. Johnson, M. D.; and Virgil E. Simpson, M. D.

The December meeting was a review of the things we had found most interesting in the preceding programs.

The lectures given by our guest speakers follow:

SOME REMARKS ON SOCIALIZED MEDICINE

Especially as Found in Austria.

Herman Mahaffey, M. D., Louisville.

Some of you present may say to yourself, State or Socialized Medicine is no concern of mine. But I say to you, it is a concern, not only to each of you present, but also a concern for every inhabitant of our great country.

In order to give you an idea of what State Medicine really is, permit me to describe to you the conditions as seen personally in Austria during the latter half of 1936 before Hitler completed his Anschluss with Austria. Many of the conditions were observed personally. Others were given in detail by the first assistant of Professor Neuman in a two-hour lecture before our club one evening. I might add, before he began his lecture, all the doors to the club rooms were securely locked. Those conditions which prevailed in Austria are practically parallel with those in Germany at this time. (Until Anschluss, March 13, 1938).

In Austria it was assumed that all clinics (including Hospitals) were built and kept up by the Government for research and teaching purposes. I might add at this point that we saw human beings who were merely guinea

pigs. Very little, and in some instances, no consideration for the feelings of the patients was given. Diagnosis of Cancer was freely discussed, as was prognosis, in the presence of the patients. This is something which is not done in our country. We endeavor to spare the individual anguish as much as possible.

Here, the richest man may apply to a private Physician for Medical or Surgical care. When financial considerations are discussed, he may decide the fee asked is too large and leave. We shall suppose that this individual needed a diseased gall bladder removed. He may turn up some few days later on the operating table of the Doctor whom he had previously consulted. This Doctor must then operate on him free. There is no way in which he can ask or receive compensation for his services. Suppose this Doctor should refuse to operate on this patient without compensation. The patient may then sue and collect damages from the Doctor in question, and most likely, within a very few days, he would be let out of the clinic and be without a job. Such a condition does not exist in our country. Here, the Doctor may choose whom he wishes to serve if he so desires. Our Doctors do not refuse any aid they may be able to give in a time of emergency. However, when the Emergency has passed he may advise this patient to see some other Doctor for further care or treatment.

Now suppose someone with very limited means applied for treatment and care. He must apply to the clinic in which district he lives. He may not go from one clinic in one part of the city to a clinic in another part of the city. Consequently, he must take the advice of whatever Doctor may happen to be in this particular clinic, even though he had never seen the Doctor previously. In our country we have the freedom of choice except in public institutions. The Doctors are shifted around as checkers on a checker board from one clinic to another. Many patients present themselves each day for medical care and advice. After a period of time has passed the patient may feel that he is becoming acquainted and forming a worthwhile friendship, but the next few days finds a new man in the Doctor's place. So you can readily see there

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is little chance for a deep mutual understanding and friendship to be formed such as we have in this country.

All clinics have a Doctor in charge who is known as Professor. This position is obtained chiefly through political pull. For being the head of a clinic he receives compensation which does not exceed \$300 per month. It is a rare thing to see a man under fifty-five or sixty have a Professorship and be in a position to make this much money. Age and politics count more in obtaining these positions than does ability.

When a student graduates from the University, he must serve three years in a hospital without compensation, except for meals and a place to sleep. At the end of three years, if he has conducted himself properly, he may become an assistant in a clinic. In this clinic he must serve another five years without compensation before being allowed to do any private practice, whatsoever or before he can even have the opportunity to be promoted to an assistant to the assistant of a Professor. The first assistant to any Professor is known as a Dozent. The Dozent may have two assistants, who receive a small compensation. It is this position of which we just spoke. The compensation at this time may reach \$50 per month. How long this man remains in this position depends entirely on the health, longevity, and politics of the Dozent and the Professor. Probably in eight to ten years, the old Professor dies and the Dozent may be promoted to a Professorship. Then the assistant to the Dozent may be promoted to the Dozentship. The compensation for a Dozentship ranges from \$100 to \$130 per month. A Dozent and his first assistant are allowed to do some private practice if they can find any to do. This shows you that a Doctor may become an old man before he has any hopes of making what in our country is known as a moderate livelihood.

Only the Professor in charge of a clinic may limit the diseases or conditions which he treats. All other physicians must answer all calls regardless of time or place. The only excuse permitted for refusing to answer such a call is that if the Physician called is in bed, sick, and under the care of another Doctor, he is excused from answering such a call. Otherwise, he is forced to go. If he refuses to make the call, the patient can swear out a complaint;

the Doctor is brought before the court, and fined, and, in all probability, be dismissed from his position with the Government. He can also be sued by the patient and in a majority of cases will have to pay damages.

At this point it may be proper to state that all Physicians in Austria are in the Government service, whether they wish it or not. Perhaps you may ask, why does the Doctor not confine himself to private practice? We shall endeavor to give you a few reasons which make this impossible.

In Austria there are Home, County, and Community Hospitals. Each of these is equipped with accommodations for outside treatment for ambulatory patients. It is here, practically all the people apply for treatment and care, knowing they do not have to pay. They are not asked to pay for any service rendered. Even those who may be able to pay, prefer to save and hold their money for some other purpose because it is no less true in Austria than other countries, that people can find money to pay for pleasures when they can find no money to pay a Doctor for his services. With such a numerous series of clinics throughout the cities of Austria, a Doctor must be, for his self-preservation, an employee of the Government.

It is true there are private hospitals in Austria, but most of the natives do not have the money to pay them, and, as was mentioned previously, those who do have the money prefer to save it for some other purpose. They feel they pay taxes which support the Public Institutions and that these Institutions owe it to them to care for them. These Hospitals are patronized almost exclusively by the Foreigners.

The working people (as in factories, banks, etc.) group themselves together and obtain a Doctor to care for them and their families. Some years ago the Doctors organized and agreed on certain amounts per month which would be charged these various organizations for such services.

Let us take the figure of \$100 per month as the agreed price for a certain group such as a bank. Soon some Doctor who had nothing to do would make contact with the banking officials and agree to do this work for \$75 per month. Perhaps in a few weeks he would be run out by a man who agreed to do the

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job for \$50 per month. Here we have active underbidding for a livelihood in the Medical Profession. Since the heads of each organization are out to cut expenses, they are free to make whatever contracts they see fit. Most of the time they do not consider the welfare of the families of the men under them. All banks take these bids for the Medical care of their employees. Under these contracts the Doctor must also care for the President of the bank and his family even though the President of the bank has an income of \$10,000 per year. For the care of the President and family the Doctor does not receive any extra compensation.

In America the Public and Doctors have always accepted the attitude that the rich should pay more than the ordinary laborer. State employees, railroad employees, street railway employees, power plant employees, and other groups have the same arrangement. The average organization pays approximately \$70 per month for this service.

In addition to this drawback to the private practice of Medicine in Austria, there is a form of sick insurance which is set up. This is known as Krankenkassa. There is no English interpretation to this word which will convey the exact meaning in which it is used, but we may say it means "Sick Cash Benefit." This is set up by the Government, and the head of a family pays 54 cents per month to the Gov-

ernment. The Government in turn guarantees the care of his family and self when they become ill. This type of family does not pay the Doctor for any medical service rendered. The Doctors sign up and agree to do work for this class of people because there is no other alternative. A Doctor who has signed to care for these patients must give them the same consideration as if they were wealthy. This is as it should be. These patients must be taken in their regular turn at the Doctor's office. Some man more fortunate in financial circumstances can not push in ahead of this class of patients. Should the Doctor permit this to happen, again he may be sued and his contract with the Government broken.

Now a word as to the compensation received for this kind of work. If a Doctor is called to the home of one of these patients, he may charge 90 cents for his first visit, whether the patient lives in the same block in which the Doctor lives or whether he lives a mile or farther away. For any and all subsequent visits the Doctor may only charge 10 cents. For office calls, the Doctor may charge 35 cents each for the first two visits. For all subsequent office visits only 3 1-2 cents may be charged per visit. The Doctor may not charge more than \$7.50 for a tonsillectomy; \$7.50 for a mastoidectomy. These are maximum fees regulated by the Government. These are also maximum fees which may be charged

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for services to any state, railroad, or community employee. A general practitioner who has not signed to do Government work under this form of sick insurance may not charge more than seven and one-half cents each for most office visits. He may only charge fourteen and one-half cents for a home call regardless of the location from his office. The majority of the doctors will have to either ride a bicycle, street car, or rent an automobile. Only if the doctor is a very economical man does he own his own auto. Should the doctor have to ride a street car, and distance covered is more than eight blocks, his street car fare both ways will be only one cent more than what he may charge for the call made. Many times the remuneration for the call does not cover the actual expense incurred. A specialist may collect a very small amount more than the average practitioner for his services.

Added to all of this we have the matter of the forms or reports which must be made out. These are time-consuming, but must be made out and turned in to the Government before any fee whatsoever may be obtained. It has not been many months since the physicians in France actually rebelled against their Government over the forms which they were required to fill out after having seen some of the poorer classes of people. Suppose the French Doctor had twenty patients in his office during his office hours for whom he had to make these reports. At the end of his office hour it required another four and one-quarter hours to fill out the twenty different reports for the twenty patients. Conditions are not as bad as they are in Austria, but it is quite a time-consuming task to complete these forms.

A chief of a clinic or Professor may have as many assistants as he desires. Only the first two or oldest assistants are allowed to do any private practice whatsoever.

The Professors who attend members of a royal family are never paid for these services. Instead they receive a monogrammed cigarette case, cuff links, or a ring. These they accept believing the advertising they get for their services to royalty may compensate them. They never present a bill to royal families and the members of a royal family, feeling that a small gift or token is sufficient pay. For two weeks services to King Edward VIII in September, 1936, Professor Neuman received a present of gold cuff links which bore the family crest of King Edward VIII. This was his only compensation. Actors and musicians also never pay physicians for their services. Instead a present of an autographed photograph is considered sufficient pay.

As mentioned before, in Austria, as to a

great extent in America, people can find money for jewels, operas, automobiles, but find the most convenient ways to escape paying the physician. I recall asking the first assistant of Professor Boehler during ward rounds if their private patients were not treated and cared for better than those which we were at that moment seeing. To my astonishment he became incensed and retorted, rather sharply, "These are our private patients. They are getting the best care possible. From what I hear of your American system, we have no such thing as a really private patient." These patients generally speaking receive only that care which is absolutely necessary, and due to the expense of many of the procedures, some of them do not receive care which even our poorest here in America obtain freely. The doctors do not become concerned if one of these patients goes bad and dies. They feel it is only another exhibit for the autopsy room. Then sole concern is the autopsy to find out if they were correct or not in their diagnosis and treatment. There is no opportunity for the doctor to form a close attachment to the patient such as we have here in America.

In our own country, an increase in income and in practice depends largely upon our personal attentiveness and relationship to the individual case as well as the scientific knowledge we possess. From observations in Vienna, I would say I did not see a single instance where the doctors exhibited more than a perfunctory interest in the patient as an individual. His sole interest was in the condition present. The doctors of America, today, are often taken into deepest confidence of many of their patients. Some secrets are discussed with us which are not discussed with other living humans. But could such a condition exist if there were not a very deep understanding and sympathy between the doctors and their clients? Under state, or socialized, medicine such conditions do not exist. In a large majority of instances there is no previous contact or acquaintanceship between the sick and the doctors of Austria.

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You may say their standard will be raised? How will your own standard of living be affected if the Doctors of this country are subsidized? These are questions which the Public will answer. We hope the answer is to keep Medicine under the direction of medical men—not under POLITICIANS.

LOUISVILLE COMMUNITY HOSPITAL SERVICE

D. Lane Tynes, Louisville, Director.

The Louisville Community Hospital Service is a non-profit plan for hospital care. Backed by Norton Infirmary, SS Mary & Elizabeth Hospital, St. Joseph's Infirmary, Jewish Hospital and Kentucky Baptist Hospital. Enrollment began on August 1st, 1938. To October 10th, almost three thousand persons had become members and forty of these had been hospitalized.

Two types of service are offered—semi-private and private. Monthly dues for semi-private members are 65c for the individual and \$1.30 for the family. The private rates are 85c and \$1.70. The family is defined as husband, wife and all unmarried children, regardless of number, under nineteen years of age. Each member of the family is entitled to full and separate protection.

The benefits offered allow 21 days out of the year in the hospital. Members who stay over 21 days have one-fourth of their bill paid for the ensuing 69 days. Services included are room, board, general nursing service, use of the operating room, ordinary medications, dressings and routine laboratory service. Benefits do not include X-ray or pathology.

There is a waiting period of twelve months on obstetrical cases and hospital care in these cases is limited to ten days.

Members, except in emergency accidents, are admitted to the hospital on their own physician's recommendation. The contract provides that nothing shall be construed to interfere in the relationship between doctor and patient.

Louisville Community Hospital Service was the first to be organized under a new Enabling Act passed at the last session of the legislature. This Act, which does not include medical services, places hospital service plans and contracts under the direct supervision of the State Commissioner of Health, who is also the Secretary of the State Medical Association.

Successful hospital service plans are a clear-

cut demonstration to Government that the doctors, the hospitals and the public can co-operate to solve their own problems.

PANEL DISCUSSION

Monday, November 7th

HEALTH OF THE TRANSIENT

**Major Wesley Bouterse, Salvation Army,
Louisville.**

With the development of modern social work practice, there is almost always some intelligent answer to any immediate social problem. If it is a family situation, a case worker works out the problem; if in the field of health, child placement, recreation or delinquency, there is usually an expert to be had in each field. This, however, is not the case with the general field of transiency. Men by the thousands, and women and children in lesser numbers, are roaming the country at the present moment, have been doing so for a number of years, and very few people seem to be concerning themselves about the problem in general.

A common attitude is expressed thus: "We have our own problem in our community; we certainly haven't the money nor the inclination to care for men or families that don't belong to us, and are, consequently, not our responsibility." The easiest thing for us to do is to help them temporarily—and pass them on as quickly as possible!

Even though these people may be poor, they have the right to move their location if this pleases them. I need only ask how many in this room were born in this city. Most of us come from somewhere else. As we had the right to come here, so had they.

It is also well to remember that we live near the edge of what has been termed by the Federal authorities, "the Rural Slums." Certain of our Southern Mountain area has been pronounced unable to support the population. It is a fact that, there are numerous families in the rural Kentucky areas that make less than twenty-five dollars a year in cash from their crops. What can they do? Do the same as you did; move away and come to Louisville. Or, elsewhere.

And so they move from one place to another with their problems of health, and family. How



desperately we need more prevention work for all our ills!

Another cause of transiency is the hospital opportunities that this city affords. The City of Louisville has a good hospital. The sick come here from surrounding Counties and States to take advantage of its service. It is a charitable institution and they are in need, and so they come. If there is a man who has been on the sick list for a period of years, with an old malady, he comes to the City Hospital with the cherished hope that he can get treatment or an operation, with the attending care, for a period that, in his heart, he hopes will last a long time. Unless he has a contagious disease, or is an emergency case, he is not admitted. As it is, the City Hospital, during the last year, spent on an average of over a thousand dollars a month on medical care for non-residents. Patients were only admitted that could be classified as emergency cases.

But this is not our greatest problem. What are we to do with the families that come into Louisville with their sick children for the express purpose of receiving treatment from the Children's Free Hospital? The Hospital has the word, "Free" in its name, and the condition in its charter that it care for helpless children. But in the performance of this service for which it was founded, they also bring countless other social problems. We have, for instance, been keeping a mother in our Transient Lodge for Women, since last February (eight months), because her boy is in the Children's Free Hospital. This woman has not a penny for her own food or clothing. She is a charge on this community while her boy receives medical treatment that would cost you, or me, thousands of dollars. Don't suggest that we get her home County to help her. Have you never heard of some of Kentucky's pauper Counties? If not, ask the hospital social worker. The health problems of our transients are not all as simple as the one just described.

Here is another typical case. A man from this State left his home to live with relatives whom he hoped could support him. While with them he was taken sick. Again he moved into another County where he hoped friends would take care of him. There was no local medical or hospital equipment adequate to care for him. He was finally discovered by our

County Health Authorities, lying on a bed composed of three chairs, in an impoverished home, containing four children. He was in the last stages of tuberculosis. The local Health Authorities traced this man's wandering and found that he, during his illness, had infected fourteen people with TUBERCULOSIS. That man sowed the seeds of tuberculosis wherever he went. What is the remedy for this situation?

The remedy is, obviously, better health opportunities in our rural areas; more County Health Units, with doctors and nurses trained to teach and to do prevention work.

We boast of the fine work our Hospital and Health agencies are doing for this city and county. All of these things are splendid and we are enjoying their benefit. But, the medical profession in this State, and in all other States, must be judged not only on the fine work of caring for the sick that they are doing here amid all these conveniences, but also on the lack of work or the poor work they are doing outside the larger cities with hospitals and clinics on every hand. Throughout the country, there are Counties and great rural areas without Health workers or so much as the poorest example of a hospital. What are the sick to do? It seems that increasing hundreds of them are deciding to come to Louisville.

We must diligently keep this city up to the fine health standards set by the city and county authorities. But, someone, and, doubtless, that means the medical profession itself, must begin to care for the thousands of sick people who are doomed in the underprivileged areas.

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**CARE OF THE INDIGENT SICK OF
LOUISVILLE
FROM A SOCIAL WORKER'S POINT OF
VIEW**

**Mathilda Mathisen, Director, Social Agencies,
Louisville City Hospital.**

As most of you know the City of Louisville has made fairly adequate provision for the indigent sick. Those who need bed care can receive it in City Hospital; those who are sick but not bed-fast can come to the clinics; those who become acutely ill in their homes can call a City Doctor. In addition to these services, private physicians carry a load of charity patients who for one reason or another cannot or will not seek care of the hospital.

The doctors who give care in the clinics are for the most part not paid for their services. They must take their pay out of "satisfactions."

In the running of any charity hospital experience has taught that many auxiliary services are necessary—two of which are the admitting service and social service.

Since there seems to be considerable confusion in people's minds about the division of labor between these two services at City Hospital, I would like briefly to describe their work; especially since that work is an integral part of the care of the indigent sick.

First of all, let me emphasize the fact that the Department of Social Admitting and the Department of Social Work are administratively separate and distinct both in staff and in function.

Through the years there has always been the fear that patients would seek free medical care who could pay for private care. Several studies (mainly in the East) have indicated that this abuse is not as great as one might suppose. Perhaps the reason is that we still operate pretty much on the theory of deterrence—that is, the discomfort of securing free medical care is so great that patients will go to great lengths to avoid it. Such discomforts are inherent—long waits to be seen in clinics, hurried examinations by doctors harassed by too many patients, lack of privacy on the wards, etc.

But in spite of this, there are admittedly people who through greed or ignorance do try to get their medical care for nothing. Some people find pleasure in "putting one over" on the doctors.

Because these patients do exist, it has been

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necessary to have a careful investigation of their means to pay a physician or private hospital before free service can be extended to them. This investigation is one of the functions of the Social Admitting Department.

At City Hospital there are three classes of people ineligible to care on the wards; namely: a person who has not resided in the State a year and in Louisville six months unless he presents a true emergency; a person who is eligible for compensation; and a patient able to pay a private doctor or hospital in full or in part. After the admitting doctor has determined that a patient is in need of hospital care from the medical point of view, the patient is interviewed by a worker in the Social Admitting Office to determine his eligibility from the three points of view previously mentioned.

The first two are fairly obvious and can usually be proved by documentary evidence; the third frequently causes serious questions. Most hospitals have found it utterly impossible to fix a maximum income and say that all who receive less than that amount can be admitted; those over that amount cannot be. Perhaps a lone man with no obligations except for himself earns as much as a man with seven children and a wife to support. Obviously the man with dependents cannot be expected to have as much money to meet his health problems as the unattached one; or a patient with a long-time expensive illness has greater difficulty than one with an acute illness which ends quickly.

Consequently, many hospitals found that rigid classifications worked genuine hardships both ways and put workers in their Admitting Departments who had some training in the techniques of a financial investigation and had shown skill in balancing the pros and cons of allowing free medical care in the light of the patient's total set-up. These workers were usually social workers because it was thought their training best fitted them to make such investigations and decisions. This line of reasoning was followed at City Hospital with the

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result that the Admitting Department is headed by a social worker with one trained social worker as an assistant and several clerical helpers.

The staff is too small to undertake investigation for clinic patients. Therefore, practically no effort is made to determine the eligibility of clinic patients and doubtless patients receive care there who ought not to do so. A brief study last January indicated that it was the non-resident who slipped through our fingers and received clinic care rather than the financially ineligible.

Another function of the Admitting Department is to steer ineligible patients to private doctors or back to their own communities for care. The patient is referred to a doctor whose name has been secured through the Physicians' Exchange. The Department either gives the patient a letter to take to the doctor or telephones for an appointment for the patient. Beyond that it cannot go. Consequently, we do not know whether the patient consults the doctor or whether the doctor accepts the patient.

I have prepared a table to show how many applications were received in the last fiscal year from the three ineligible categories. About half of these were admitted because of medical emergencies. The second half of the table indicates the numbers referred to private doctors.

	Total	Non Resident	Financially Ineligible	Compensation
Application for care	699	549	93	57
Admitted	384	352	20	12
Rejected	315	197	73	45
Referred to private M. D.	38	17	18	3
Admitted and referred	2	1	1	0
Rejected and referred	36	16	17	3

It is interesting to note that over 78 per cent of the financially ineligible were rejected as contrasted with 36 per cent of the non-residents. This is probably due to the fact that the non-resident is usually penniless, whereas the other group can be expected to use available medical resources. It will also be noted that about 20 per cent of the financially ineligible were referred to private doctors as opposed to about 3 per cent of the non-residents.

I wish to state in passing that the financially ineligible group are usually border-line and the private doctor finds himself involved in serious problems with them; because although they may be able to pay his fee, they are not able

to pay for X-rays or other expensive laboratory work.

So much for the Admitting Department.

Now, what does the Social Service Department have to contribute to medical economics in the case of the indigent sick?

One contribution is in speeding the turnover in bed population. One of our functions is to try to persuade patients out of the hospital by making it possible for the patient to secure proper care on discharge. This may mean shaming reluctant relatives into assuming their responsibilities; it may mean getting other social agencies to tide the family over the period of illness by giving relief or other services; it may mean teaching a spend-thrift wife or mother to budget the income to cover the cost of the patient's care; or it may simply mean boosting the patient's morale to the point where he can again assume his own responsibilities. It is a hard step for some patients to take—the step away from a clean bed, three meals a day, warmth, and companionship to an insecure world of haphazard meals, cold, uncomfortable home, or no homes at all.

When Dr. Richard Cabot conceived the idea of using social workers in hospitals, his major concern was to see that the doctors' orders were carried out. Therefore, it became the job of the social worker to see that the patient understood the doctor's orders and to help him remove obstacles to the carrying out of his orders. That might mean finding money to pay for a brace or glasses or false teeth; or it might mean persuading the family to move to a better house (for instance, to get a heart patient to live in a place that did not require stair-climbing); or it might mean giving dietary instruction.

Although this service cannot be measured in dollars; yet I believe it does save much in the way of preventing recurrences, or of shortening the time the patient needs to be under medical care.

There are other services rendered by the Social Service Department, but I think the above is enough to indicate the general line of cleavage in duties between the two departments.

In the course of working with the indigent sick we have found some large gaps in available medical care. Most of these gaps are not in doctor-patient relationship; but in facilities

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for the physical care of the patient. Most of these are community needs which will never be met unless the doctors assume leadership in interpretation of the need, and in securing proper facilities to fill the need.

Perhaps the largest and most difficult is the group of patients suffering from chronic diseases. The flood forced many of them out of their sick obscurity, and I have been told everyone was amazed at the size of the problem presented. Miss Haines made a study of the chronics at the request of Dr. Leavell. Since that study is available to all of you, I will not here go into detail about it. Suffice it to say, that it is perhaps our biggest unsolved medical problem at the present time in Louisville.

Closely allied to it is the problem of the Aged. On a pension of from \$7 to \$9 a month—a pension which automatically excludes the recipient from relief from any other agency—the aged person is hard put to it to keep body and soul together. Burdened with chronic illnesses and confused by senility, the patients have difficulty in coming to clinic but are refused admission to the hospital unless they are acutely ill. Yet, they are not sick enough to ask for a City Doctor's services.

All social workers wish that the medical profession would become militantly interested in G. C. Vaginitis. Rumors state that the condition is widespread in the schools of Louisville; but practically nothing is done to check it. The loss of time in school with the consequent lack of education, the delinquency that usually follows because the little girl is on the streets much of the day—the whole cost to the community is something that merits careful consideration. But the initiative must come from the medical group—it is primarily a serious medical problem resulting in even more serious social problems.

What can be done for the tuberculous patient who falls between the two horns of our residence requirements? Most agencies accept six months as establishing residence in Louisville if the patient has lived in Kentucky a

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year. Waverly Hills requires a year's residence. If at any time, within that year the patient has had to be admitted to City Hospital, Waverly Hills rules that the patient has lost his right to residence and the period of care within City Hospital must be subtracted from time he has been in Louisville. Consequently, active cases of tuberculosis have to be put on the open ward at City Hospital and forfeit their right to care at Waverly Hills, or they must live as a menace to public health in the community. I hold no brief for or against the policies of the agencies involved—I merely want to point out that this is a serious gap in the medical care available to the indigent sick.

Another headache for social workers is the patient who needs convalescent care. Necessarily, patients have to be discharged from the hospital at the earliest possible moment to make room for others. Home conditions are often such as to ruin the work done in the hospital; but a period of convalescent care might have built the patient up to the point where he could endure the home conditions. We see this very plainly in our Pediatric Service. We can send white children to the Jewish Convalescent Home but there is no place for Negro children. Every youngster who has had convalescent care has improved markedly in health and has been put back into his own home with a minimum of damage to him. But, for example, a colored baby was brought in with pneumonia and survived. However, he had three re-admissions that winter because the home was not adequate to his need. If somehow, he could have been built up physically before he returned home, the recurrences might have been avoided.

On the whole, however, the indigent sick get as adequate medical care in Louisville as in any city of its size. They are better off than the middle income group. The doctors of Louisville are to be complimented on their devotion to an ideal of service which makes possible the excellent work done for the indigent sick.

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MEDICAL CARE FOR THE MIDDLE-INCOME GROUP

Anna J. Haines

Executive Secretary, Louisville Health Council.

You will remember the beginning of the old recipe for rabbit pie—"First, catch a rabbit." Probably any consideration of financing medical care for the middle-income group should begin with some definition of the term. Who really are in this group, that represents people above the indigent mass and below that happy collection of individuals who do not have to count their pennies before incurring any expenditure?

SALES MANAGEMENT, a trade journal for wholesale and retail merchants, says that the statistical middle income in Louisville for families not on relief is slightly over \$1500. For most of us a more understandable approach to the problem is to ask, Whom do we know in this group? We will probably all agree that it would contain school teachers, owners of small business concerns, managers of the larger chain stores and gasoline filling stations, civil service employees, bank clerks, and those in other clerical positions.

Our next problem is, How much do these people earn? In order to present a concrete and accurate answer to this question, I have been making a nuisance of myself in the past few weeks by asking almost everybody I knew how much income they had. I was out—not for rabbits—but for guinea pigs. I found that school teachers and bank employees, who are heads of families, earn in the neighborhood of \$2,000 a year; that the younger members of the professional groups have incomes varying from \$1,800 to \$2,500; that managers of the larger chain stores and filling stations make from \$1,800 to \$2,100; and that the income of small business owners would average within these figures. I believe it would be fair to state that, in this neighborhood, \$2,000 a year is a typical upper middle income. And since the United States Census figures show that Jefferson County has an average of four persons per family, we shall consider this middle income family to consist of two adults and two children under 16 years old. I am sure you all know dozens of people who would fit this description.

Let us consider now the probable annual expenses of this group of four individuals. The expenses for medical care are necessarily only a part of their total expenses. Indeed, the kernel of the problem for the middle-income group is that their medical expenses are unpredictable and that most of the other items in their budget are inevitable. In preparing these items and the amount spent for them, I have consulted with a number of Louisville families

whose incomes range from \$1,800 to \$2,500 a year. There is naturally some variation in the amounts spent on individual items. But on the whole there was a remarkable agreement, based not so much on the way in which they desired to spend their money as on the way in which they must spend it. The items which were common to practically all families consulted are shown on the following chart.

Expenses of a Middle Income Family, 2 Adults and 2 Children) Louisville, 1938.

Item	Monthly Expenses	Annual Expenses
1. Rent	\$35.00	\$420.00
2. Household Upkeep	15.80	190.00
3. Replacement and Repairs	*	100.00
4. Food	40.42	485.00
5. Clothing	*	245.00
6. Personal Care	3.50	42.00
7. Service or Laundry	4.35	52.00
8. Automobile	25.00	300.00
9. Recreation	*	160.00
10. Miscellaneous	4.35	68.00
11. Insurance (household and personal)	*	50.00
Total		\$2,112.00
12. Medical Care	*	150.00
Total		\$2,262.00

* No regular sum spent each month, but annual expenses quite regular.

Let us consider these items individually, in order to see what the average middle-income family spends on them. At first sight some of the amounts may seem high, but anyone who keeps accurate household accounts will agree that, if they err, it is on the impossibly low side.

EXPENSES OF A MIDDLE-INCOME FAMILY

Items in Detail

1. RENT—\$420.00 ANNUALLY.
Five or six-room house with small yard. If family lives in an apartment, the Rent item will be higher and Household Upkeep lower.
2. HOUSEHOLD UPKEEP—\$100.00 ANNUALLY.
Coal, \$50 a year; gas and electricity, including refrigerator and hot water heater, \$6.50 a month or \$78 per year; water rent, \$18 a year; phone at lowest cost, \$2.32 a month—with a couple of long distance calls, \$30 a year; cleaning supplies, \$1.20 a month or \$14 a year.
3. REPLACEMENT AND REPAIR OF FURNISHINGS—\$100.00 ANNUALLY.
Middle income family furnishings for a 6-room house probably cost at least \$1,000. Replacement at 10 per cent annually; monthly too uneven. Includes curtains, rugs, linens, china, kitchen utensils, repairs to radio and electrical equipment, stove, refrigerator as needed.
4. FOOD—\$485 ANNUALLY. Weekly Amounts
Milk—1 qt. daily for children, 1 pt. for adults, includes amount used in cooking 21 qts.
Eggs—1 1-3 dozen per week 16 eggs
Meat—5 times a week, averaging 20c a pound 7 lbs.
Potatoes—once a day 10 lbs.
Fresh vegetables and salads 15 lbs.
Dried legumes, etc 1 lb.
Fresh fruit 10 lbs.
Dried fruit 1 lb.
Cereal—once daily—and flour 6 lbs.
Bread—each meal 5 lvs
Fats (1 1-2 lb. butter, 1 lb. lard, 1 lb. bacon, 1-2 lb. oil) 4 lbs.
Sugar and Syrup 3 lbs.
Accessories (coffee, tea, spices, salt, etc.) 60c worth

TOTAL WEEKLY—\$ 9.30
TOTAL MONTHLY—40.42

Allows meat 5 times a week only.
Only enough fresh fruit and green vegetables to come within the limits of what modern physicians call a protective diet.
Allows a simple dessert once a day; does not allow for any entertaining.
Averages 11 cents a meal.

5. CLOTHING—\$245.00 ANNUALLY.

MAN—\$75	BOY—\$50
Overcoat (wears 3 yrs.)	Windbreaker
Summer Suit	Raincoat
Winter Suit (wears 2 yrs.)	1 Suit
2 Hats	2 pr. Knickers
Sweater (wears 2 yrs.)	3 pr. Shorts
6 Shirts	2 Sweaters
3 pairs Shoes	6 Shirts
Underwear	4 prs. Shoes
Accessories (neckties, collars, belts, gloves)	Underwear
Dry Cleaning	Rubbers
WOMAN—\$85	1 Hat
Winter Coat (wears 3 yrs.)	Accessories
Spring Coat (wears 3 yrs.)	GIRL—\$35
Sweater (wears 2 yrs.)	Winter Coat
2 Hats	Raincoat
2 Street Dresses	2 Wool Dresses
4 Home Dresses	1 Wool Skirt
3 Work Dresses	2 Sweaters
1 Evening Dress (wears 2 yrs.)	2 Hats
3 pairs Shoes	4 Cotton Dresses
12 pairs Stockings	1 Gym Suit
Underwear	4 prs. Shoes
Accessories	Rubbers
	Underwear
	Accessories

6. PERSONAL CARE—\$42.00 ANNUALLY.

First Aid: Bandages, gauze, adhesive, mercurochrome, alcohol, etc.

Medicines: Laxative, boric acid, Vick's salve, hot water bottle, thermometer, etc.

Total Monthly—\$1.35

Toilet Articles: Tooth paste, cosmetics, soap, shaving material, etc.

Total Monthly—\$1.70

Haircuts:

Total Monthly—\$1.50

7. SERVICES OR LAUNDRY—\$52.00 ANNUALLY.

Average middle income family would have a maid one day a week or send out household laundry at \$1.00 a week.

8. AUTOMOBILE—\$300.00 ANNUALLY.

Does not allow for garage hire.

Most budgets allow \$30 a month for expense and replacement of car.

9. RECREATION—\$160.00 ANNUALLY.

Based on expense of 1 movie a week for each member of family. In many cases adults will not go that frequently, but will spend as much money on occasional good concert or lecture.

\$0.85 weekly; \$40.00 yearly.

Club dues of man and woman, or membership in professional organizations, P. T. A., union, etc. Scout magazines, \$3.50. Total \$14.00 yearly.

Newspaper, \$10.50; 1 expensive or 2 less expensive magazines, \$3.50.

\$14.00 yearly.

Vacation of 1 week for each member of family.

\$50.00 yearly.

Smoking material (2 pkg. cigarettes a week only).

Total—\$16.00 yearly.

10. MISCELLANEOUS—\$68.00 ANNUALLY.

School expenses: 1 child would probably have to use car fare to reach school; special tickets at \$1.50 a month for 9 months—\$13.50. School lunches either carried or deducted from food budget. Incidental school expenses, locker keys, special entertainments, etc.—\$4.50 a year for high school and \$2.00 a year for elementary school. Total—\$20.00 yearly.

Contributions:

Church—at least \$25 a year

Charity—Community Chest, Red Cross, Tuberculosis Association, etc., \$5. Total—\$30.00 yearly.

Taxes: Probably not federal income, but state, county, and city would average \$8.00 yearly.

Presents—Some would be reciprocal, but others for weddings, etc., not—\$10.00 yearly.

11. INSURANCE—\$50.00 ANNUALLY.

\$10 on property, \$40 on person. This is very little; most families try to carry more. It would not be adequate protection for family if wage earner died.

TOTAL, WITHOUT MEDICAL CARE—\$2,112.00.

12. MEDICAL CARE—\$150.00 ANNUALLY.

In most families of 4, there is apt to be one fairly serious illness a year. It may come to an adult or to one of the children; it may or may not involve an operation. It might be pneumonia, gastric ulcer, scarlet fever, appendicitis, fibroid tumor, abscess on neck, diabetes, tonsilectomy, a mastoid, a fracture. If it were an operation entailing a ten-day stay in a hospital with a special nurse for part of that time, the total cost could scarcely be less than \$250. Supposing we count it to be a lesser trouble and place the cost of this one serious illness per year at the smaller figure of \$100.

Then there would be some minor colds or sinus treatments or immunizations which could be taken care of by visits to the physician's office. A conservative estimate for a family of four persons would be 5 such visits a year at a total cost of \$15.

A middle-income adult would probably be sufficiently well educated medically to expect to go to the dentist once a year for preventive services. One out of every two such adults would undoubtedly need some dental treatment. Those two adults would between them have to pay about \$20 a year for dental services. If they went less often, their bills for each siege would be higher.

The children might get prophylactic dental care at school, as well as superficial examination of the eyes. Each year, however, one or the other of the children would be almost sure to need dental treatment or an oculist's examination and glasses. These services would average at least \$15 a year.

Thus we see that \$150 a year is not at all a high estimate for annual medical expenses of 2 adults and 2 children. Consultation with numerous middle-income families confirms this statement.

Dr. Bradbury, a Philadelphia physician, estimates in his book that a similar family would need to spend at least \$250 for care probably needed.

No one feels that these charges are excessive. Medical education today is very expensive, physicians' overhead is heavy.

But the average middle-income cannot meet these quite legitimate charges.

We now have a total of \$2,262 annual expenses which face a family with an income of \$2,000. If the wage earner himself is ill, the income would be less than \$2,000 since few organizations pay full wages to a sick employee. Yet none of these outlays seem extravagant; there are only a few items which could be stricken out. If we take away their automobile and most of their recreation it would probably bring their expenses within their income, but perpetually grinding along on a mere existence is not "the American way of living." We can see in Europe the unhappy results of too long a period of restless discontent among the middle as well as the low-income group. The average family in Louisville cannot be quite self-respecting if it does not own an automobile. We may say they should be, but we must admit they cannot be.

The American middle-income group is today a group accustomed to regularly recurrent pay days. 100 years ago 4 out of every 5 gainfully employed persons owned their own means of livelihood. They were farmers, storekeepers, small manufacturers, and professional men.

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Today, 4 out of every 5 of the gainfully employed are paid wages or salaries.

By and large, the middle class in Louisville is a salaried group. It seems natural for them to budget their expenses on a regularly recurrent basis. Rent, household upkeep, food, clothing, auto expense, personal care, domestic service, insurance, and miscellaneous items can, in fact usually must, be so budgeted. Part of the replacement and repair and the recreation items are more variable. Most of the medical expense item is entirely unpredictable. The average middle-income person, accustomed and able to cope with the regularly recurrent expenses which by themselves easily absorb all of his regular income, is completely floored by unexpected sickness—an "act of God" for which no hurricane insurance or Red Cross aid is available.

That is the problem of medical care for the middle-income group in Louisville. I have tried to present it in concrete detail, because I believe these details are frequently forgotten. I have heard people speak as though the middle-income group just didn't want to pay for their medical expenses—as though a trip to Europe or the purchase of a high priced automobile was given preference. People who can afford these luxuries do not belong, in Louisville, to the middle-income group.

I do not know what is the answer to the problem of the cost of medical service for this group. But I believe certain factors will enter into any permanent solution.

One of the factors is that it shall be **accepted as a satisfactory solution by those giving the care and by those paying for the care.** If the arrangements seem unfair to the majority of people in either of these two groups, the solution will not be permanent.

Second, I believe that **both parties** will have to **participate in making the arrangements.** Neither party alone knows all of the implications in assessing or meeting medical charges. Lay groups have often found it beneficial to them to have Medical Advisory Committees with whom they may discuss medical problems occurring in their business. Why then might it not be equally helpful for medical societies to have Lay Advisory groups made up of members from various economic levels, to discuss the economic problems occurring in their profession?

A third factor will, I think, be the attempt to make the costs of medical care for the middle income group predictable and recurrent, as are the other accepted expenses in the middle class budget. Physicians have accepted this principle in so far as it applies to hospital care of their patients.

Might it not be possible for them and their

middle-income patients, who make up such a large proportion of most physicians' patients, to work out together some such solution for their mutual economic problems?

Editor's Note

The other subjects arranged for this Panel on Medical Care were: **FOR ALL THE PEOPLE, ACCORDING TO THE GOVERNMENT PLANS**, discussed by Dr. W. O. Johnson, Secretary, Medical Economics Committee, Jefferson County Medical Society, and, **FOR ALL THE PEOPLE, ACCORDING TO THE MEDICAL PROFESSION**, discussed by Dr. Virgil Simpson, Chairman of the above mentioned Committee.

Because of limited space we cannot publish these papers, but the November issue of the Kentucky Medical Journal carries, in greater detail and more complete form than we can give it here, the Proceedings of the House of Delegates, of the State Association at the Annual Meeting in October. Written in simple English, easily understood, this, together with the foregoing programs of this Study Course published in the 1938 issue of The Quarterly (Woman's Auxiliary Section of the Kentucky Medical Journal) will give the reader a fair idea of the development of Medical Economics, to date.

Changes occur so rapidly that today's opinions on Medical Economics are apt to be found in tomorrow's waste basket! So, it is advisable to keep well-informed on Medical Association activities. We can do this best through Study Groups, using authoritative, up-to-date, references and by reading each issue of our own State Medical Journal, as well as the Journal of the American Medical Association.

REVIEW STUDY CLASS

December 5th, the Study Class of Jefferson County Medical Auxiliary, held a round table conducted by the Chairman with discussion on recent developments in Medical Economics. It was in the nature of a review of the seven previous programs of the class, all published in the 1938 issues of the Quarterly.

Emphasis was stressed, again and again, that in order to understand the aims of the Kentucky State Medical Association, it will be necessary for us to study the proceedings of the last Annual Meeting, held, October 3-6, at the Brown Hotel.

These Proceedings, including the policy of the State Medical Association, are given in full in the November, 1938, issue of the Kentucky Medical Journal. The Minutes of the House of Delegates, pp. 452-537, are most important. Of particular interest are.

The Report of the Council, pp. 454-456

The Report of the Secretary, pp. 465-477

The Report of the Delegate to A. M. A., 477-479

The Report of the Proceedings of the Special Session, House of Delegates, American Medical Association, pp. 379-484.

Reference was also made to the National Health Conference, held July 18-20, 1938, in Washington, and to the Program of the Interdepartmental Committee to Coordinate Health and Welfare Activities. This report was published in the Journal of the American Medical Association, July 30, 1938, pp. 432-454 inclusive. A summary of this report is included in the report of the Secretary to the Kentucky State Medical Association and will be found, with comment, on pp. 468-475, Kentucky Medical Journal, November 1938.

The November issue of Fortune was also introduced and a few paragraphs read to show the steadily growing interest of the general public in Medical Economics.

The new book, SICKNESS INSURANCE IN EUROPE, by J. G. Crownhart, Secretary, Wisconsin State Medical Society, Madison, Wisconsin, was presented for inspection and recommendation for study.

News From The Counties

HARDIN

Three new members have joined the Hardin County Medical Auxiliary. They are: Mrs. Walter Scott, Mrs. L. P. Herd and Mrs. William H. Barnard, all of Elizabethtown.

At the November meeting of the Auxiliary, it was agreed to furnish milk to a needy family in the city which Mrs. Garnett Bale and Mrs. L. P. Herd had investigated. The five children in the family have been without proper nourishment and the Auxiliary agreed that its help was needed as a tuberculosis preventive measure.

The Auxiliary will observe Jane Todd Crawford Day on the Thirteenth of December with an all-day sewing to be held at the home of Mrs. W. R. Bethel. The members will make garments for the county indigent tubercular patients as well as for the Christmas boxes to be sent to Hazelwood Sanatorium.

Mrs. J. M. English attended the Southern Medical Meeting in Oklahoma this month.

Mrs. H. R. Nusz was Chairman for the Crippled Children Clinic held in Elizabethtown November 7th.

Mrs. Walter Scott, a nurse of much experience, spoke to the Auxiliary about the prenatal and maternity work which the TVA is

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JEFFERSON

Mrs. Arthur T. McCormack was hostess at a luncheon on October 3 in the Roof Garden of the Brown Hotel. The occasion was the birthday anniversary of the Woman's Auxiliary Section of the Kentucky Medical Journal. The guests included the County Presidents, the past and present members of the Editorial Staff and a number of prominent Advertisers. Mrs. McCormack graciously introduced her guests and each responded with a few words of greeting, reminiscence or appreciation.

An annual project of the Sewing Unit of the Jefferson County Auxiliary of which Mrs. George Leachman is Chairman, is the buying, dressing and sending of Christmas dolls to the Frontier Nursing Association, Inc., for distribution in the mountains. On the second Tuesday of November, twenty members of the unit met at the home of Mrs. John M. Keaney and spent the day with scissors, needles and sewing machines. The result was a delightful collection of 35 dolls of many types and nationalities, each destined to bring joy to the heart of some "little mother."

Another project in which the Auxiliary is especially interested is the Benevolent Fund for the Widows and Orphans of the members of the Jefferson County Medical Society which was established recently. The Committee in charge of raising money for the Fund gave a Benefit Bridge Party on November 14, at the Kentucky Hotel.

Mrs. F. Parks Ogden was General Chairman and was assisted by Mesdames Bernard Asman, J. Rivers Wright, Charles Moore, Richard Hudson, Arch Herzer, J. K. Freeman, J. S. Lutz, O. H. Kelsell, R. C. Adams and Ernest Koch.

The profits, \$119.00, realized from the party were contributed to the Benevolent Fund.

At Canary Cottage, on November 30, co-operating with the Social Hygiene Association, the Auxiliary sponsored the showing of a motion picture "Under Five Flags," a story of Florida, and raised \$9.25 for the benefit of the Sewing Unit.

A number of members of the Auxiliary worked in booths in down town stores on December 9, 10, and 12, selling Christmas Seals for the Tuberculosis Association. Mrs. Joseph F. Dusch is Chairman of the Christmas Seal Sale Committee, and the Co-Chairmen are Mesdames Stephen C. McCoy, F. Parks Ogden and Charles H. Moore.

The Hospital Committee, of which Mrs. John M. Keaney is Chairman, was very active during December. This Committee trimmed Christmas trees in the Children's Free Hospital and in the male and female psychopathic wards in the City Hospital, and distributed gifts to the patients.

While the trees were being trimmed the glee club of Sacred Heart Academy sang Christmas carols. The same group of girls, under the direction of Professor Joseph Panther, gave a program of songs at the Annual Luncheon, on December 5, at the Brown Hotel.

Among the Kentuckians who experienced the hurricane of Sept. 21 in New England were: Mrs. Henry Enos Tuley, with her sister, in Woodmont, Connecticut, and Dr. and Mrs. Hugh R. Leavell and children, New Haven, Connecticut, where Dr. Leavell is taking a post-graduate course in Public Health at Yale. Dr. Leavell reports that he prefers a hurricane to a flood—any day! Mrs. Tuley, although unhurt during the hurricane, has been a patient at the Milford Hospital, Milford, Connecticut, since early October. A late report says Mrs. Tuley is now with her son's family, 514 Sylvan Ave., Glen Olden, Pa. and eagerly welcomes all cards and letters from friends.

MADISON

Since the October Quarterly appeared, the following Committee Chairmen have been appointed by the President, Mrs. John B. Floyd: Cancer—Mrs. Harry Blanton, Richmond; Tuberculosis—Mrs. L. C. Coleman, Richmond, who will serve as Co-Chairman with Mrs. R. H. Cowley of Berea. Other Members of the Tuberculosis Committee are: Mrs. Hugh Mahaffey, Richmond, and the following Members of Berea—Mrs. John Armstrong, Mrs. L. A. Davis, Mrs. A. F. Cornelius, Mrs. W. H. Lewis.

SAMPSON COMMUNITY HOSPITAL

The Medical Auxiliary of the Sampson Community Hospital District met November 15, 1938 with Mrs. Eagle Bushong at Tompkinsville, Ky. Mrs. George Bushong assisted in

serving a delightful buffet luncheon to eighteen members.

Mrs. C. C. Howard and Mrs. Clifton Richards gave reports from the State Meeting in Louisville. They reported a splendid meeting and are very enthusiastic over having our Auxiliary meet all the requirements for being an A-1 Auxiliary this year.

We voted to send a box to Hazelwood for Christmas and to observe Jane Todd Crawford's Day December 13.

Miss Margaret Richards's Class in Expression is presenting Charles Dickens' "Christmas Carol" in school.

Miss Mildred Holman and Dr. John Dickinson were married October 28th, 1938. After a trip in the East which included the International Medical Assembly in Philadelphia, they are at home at his mother's, Mrs. B. G. Dickinson, West Washington Street, Glasgow, Ky.

Mrs. W. A. Weldon, Mrs. Clifton Richards, Mrs. C. C. Howard and Mrs. C. C. Turner attended the State Meeting in Louisville.

Miss Mildred Howard, University of Louisville, and Miss Lois Howard, Transylvania College, Lexington, Ky., spent the Thanksgiving Holidays with their parents, Dr. and Mrs. C. C. Howard, Glasgow.

Dr. and Mrs. William Wells, Dr. and Mrs. C. C. Turner, Dr. E. L. Palmore and Dr. C. C. Howard attended the Southern Surgical Congress in Oklahoma City.

Dr. Wells read a paper on "The Treatment of Trachoma."

Mrs. J. W. York, Canmer, Ky., is spending some time in Florida.

Miss Brookie Leggett, Anesthetist at the Sampson Community Hospital, and Dr. W. F. Owsley were married in September. They are making their home in Burksville.

Miss Mary Ola Depp has returned to her home in Kansas City, Mo., after a visit with her parents, Dr. and Mrs. C. G. Depp, Hiseville.

Mrs. S. R. York, Center, Ky., is much improved after receiving treatment at the Community Hospital, Glasgow.

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Business men who refuse to advertise remind us of Amos Bronson Alcott who would not allow his land to be manured because he considered it "a base and corrupting mode of forcing nature."

—From Brickbats and Bouquets—Thomas Dreier.

PRESIDENT'S MESSAGE

Mrs. H. V. Usher, Sedalia, Kentucky

Spring is here!

May all the freshness and beauty that nature brings with new life and growth inspire us with greater vision for Auxiliary development as we push forward to completion the projects now under way. But five months remain of this Auxiliary year!

State Chairmen are active. Each has valuable results to report.

County Auxiliaries are busily at work. All are keeping accurate records of their attainments, I hope, for the Achievement Contest Award of the Blue Ribbon at our next Annual Meeting.

Just a gentle reminder to County Presidents: Reports of Achievement should be sent each month to our Program Chairman, Mrs. S. C. McCoy, Preston Street Road, Louisville. (See page 3, January Quarterly.)

County Treasurers are urged to pay dues promptly to the State Treasurer, Mrs. Luther Bach, 325 Taylor Blvd., Bellevue.

April 13 has been designated as the date for observance of Doctors Day, honoring Dr. Thomas Walker, the first white man who built a house in Kentucky, after he came through Cumberland Gap, April 13, 1750.

Will County Presidents please report promptly to me their type of observance, so that I may include it in my National Report?

Our National Organization, the American Medical Auxiliary, will meet next May 15-19, in St. Louis. Headquarters will be at the Chase Hotel. It is my hope that a large representation from Kentucky will be present.

For Kentucky's full report, the work of each County Auxiliary is essential. Will each County President please send me a report of the year's work for her organization to date? Everything accomplished since the meeting of the American Medical Auxiliary last June is desired.

I am sure that more of our members would make greater effort to attend these Annual Meetings could they but realize the great benefit that comes in various ways from meeting, mingling, and working with these enthusiastically active Auxiliary-minded wives of physicians from all over the country. Delightful friendships develop in organization activity.

Due to the last illness of my mother, I was unable to be present at the Mid-Year Board Meeting. But the First Vice-President, Mrs. John M. Blades, ably served as the presiding officer, as you will find from the Minutes on page 59.

I had the pleasure of attending the meeting of the Franklin County Auxiliary in Frankfort, March 9, at the home of Dr. John G. South and Mrs. South. Mrs. Joseph Barr, the new President, is a wonderful leader, whose ambition for real accomplishment seems to be shared by all the members.

After adjournment, I enjoyed the social hour, meeting Mrs. Edwin Morrow, widow of our late Ex-Governor, who did so much for public health. Mrs. Smith, greatly interested in Auxiliary projects, is a charming hostess. Having traveled extensively, Mrs. South has furnished her home with rare, valuable, and unique pieces collected from England, Italy, Portugal, China, India, and other countries. Sensing my weakness for antiques, Mrs. South graciously took me on a tour of inspection throughout her interesting home, which gave me a real thrill of adventure.

Franklin is a promising Auxiliary.

ADVERTISERS BAZAAR

Mrs. J. E. Wier, Advertising Manager

The second Quarterly Luncheon Meeting of the Woman's Auxiliary to the Jefferson County Medical Society will be held at the Brown Hotel Monday, June 5th at 12:15 P. M. Immediately following the luncheon, there will be an Advertisers' Bazaar featuring a Style Show, Music and variety entertainment with drawing of prizes furnished by our advertisers. The entire program is planned to make the organization better acquainted with our Advertisers.

Mrs. Phillip E. Blackerby, President of Jefferson County Auxiliary, extends a cordial invitation to members of all County Auxiliaries to be present at this Luncheon and Bazaar. Luncheon tickets are 85 cents; reservations may be sent to Mrs. Bernard Asman, 2200 Napoleon Boulevard, by June 2nd. It will not be necessary to make reservations for the Bazaar which will start promptly at 1 o'clock. Come and bring your friends.

Indolence and stupidity are first cousins.—Rivarol.

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Cancer Control

HELP WOMAN'S FIELD ARMY

Mrs. J. Duffy Hancock, State Chairman.

Instead of reporting on activities of the past quarter, we want to urge your assistance during the next quarter, or, rather to be exact, during the next month. April is the time for the annual enlistment drive of the Woman's Field Army of the American Society for the Control of Cancer. This group is now well organized in practically every county in the state and the State Executive Committee has been enlarged to include physicians representative of the various parts of Kentucky.

Since this organization is doing a tremendous piece of work—a good portion of which would otherwise fall upon us—the least we can do is to cooperate by both recommendation and solicitation. The recent poster contest among school children, label sales by Boy Scouts and Woman's Clubs, and the mail distribution of educational booklets have publicized and expanded the work of this group to such an extent that we are not only obliged but proud to know something about it and to help advance its program. If there are any in our Auxiliary who care to look at cancer control from a selfish viewpoint only let them remember that physicians' families are not exempt from cancer.

Please help the membership drive of the Woman's Field Army of the American Society for the control of Cancer—April 1939.

Thanks.

ORGANIZATION CHAIRMAN SPEAKS

Mrs. John M. Blades, Butler, Chairman

After the State Medical Meeting in Louisville last fall, the members of the Organization Committee met to plan for active work. Members of this Committee are Mrs. John M. Blades, Butler, Chairman; Mrs. H. Scott Hayes, Louisa; Mrs. John Floyd, Richmond and Mrs. Clifton Richards, Glasgow. It was decided to divide the state into four sections. Each member took a certain number of counties in which there is no Auxiliary. The first step was to secure the cooperation of the Medical Society in each of these counties.

While the response to these efforts has not been one hundred per cent, the Committee is most appreciative of the cooperation received.

The Committee will be glad to send a copy of a "suggested constitution and By-Laws for County Auxiliaries" to anyone interested in helping to get our state organized. It can be arranged to have one or more State Officers meet with such a group to give inspiration and practical suggestions.



Tuberculosis



Mrs. Lucius Ernest Smith, Louisville, State Chairman.

THISTLES AND TUBERCULOSIS

The comparison presented on the cover page of this issue contains much valuable food for serious thought for those who take time to think. Every case of tuberculosis comes from another case of tuberculosis.

Every thistle comes from another thistle. Every thistle that is allowed to go to seed may mean a crop of thousands of new thistles next year.

It is the business of the thistle to scatter its seeds, so it clothes them with downy wings that makes it easy for even a gentle breeze to spread them from place to place.

The Canadian Thistle is able to increase its family in another way which is just as difficult to control. In addition to scattering its seeds, it grows under ground and sends up new plants from its roots. But thistles can travel farther and faster when spread by seeds. In order to get rid of thistles, the good farmer destroys the spreader and seeks out the new plants—that is, finds them early, before they have sunk their roots deep into the soil. Then, they can be destroyed.

Tuberculosis is very similar to thistles. Every case of tuberculosis comes from another case. Every case of tuberculosis which is allowed to mature may become a spreader of tubercle germs. In the matured cases of tuberculosis, the disease sinks its roots deep into human tissues and, like the thistle, spreads from tissue to tissue throughout human bodies.

The thrifty farmer watches his farm and is constantly alert in his efforts to locate growing thistles as early as possible, when they can be destroyed without damage to his crops.

The Kentucky Tuberculosis Association and the State Department of Health constantly urge that every one, everywhere, be alert in seeking out those in whose bodies tubercle germs have taken root. Tuberculosis, like thistles, can be controlled without serious damage to the patient, but only when found early.

For many years the month of April has been designated throughout the nation as the appropriate time for an Early Diagnosis Campaign. That is a time when special emphasis may be placed on tuberculosis with the avowed intention of finding cases before serious damage has been done.

This year the National Tuberculosis Association, working through our State and local associations and in cooperation with the State Department of Health, is emphasizing the im-

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portance of locating tuberculous infection at the earliest possible moment. Under the slogan "HELP FIND EARLY TUBERCULOSIS," the Kentucky Tuberculosis Association, working through local health departments, physicians, social and civic clubs, schools and other groups, is endeavoring to arouse the people of Kentucky to a deeper realization of the far reaching menace of neglected tuberculosis.

We are not lacking in knowledge of the tuberculosis problem. The practical and continued use of modern weapons now at our disposal will find tuberculosis early, at a time when very little damage will have been done and when it can be cured.

The tuberculin test, properly applied, will find infection very soon after the germs have entered the body. The X-ray will reveal the extent, location and the nature of the damage done, and suggest the wise course to follow in treating the infected person. This knowledge is of no value unless we see that it is applied. Knowledge, in itself, is of no more use than preaching. Both are useful when practiced.

Do your bit where you are. Free literature, films and exhibit materials may be had, without cost, by writing the Kentucky Tuberculosis Association, 620 South Third Street, Louisville.

What we have done for ourselves alone dies with us. What we have done for others and the world remains and is immortal.—Albert Pike.

FILMS AVAILABLE FOR YOUR USE
Do You Want a Movie for your Next
Health Program?

Do you want a sound film or a silent film concerning Tuberculosis?

If so, write to Dr. L. E. Smith, Executive Secretary, Kentucky Tuberculosis Association, 620 South Third Street, Louisville, and ask for the use of one of the following 16mm films:

Sound Films—16mm

BEHIND THE SHADOWS—Gives information good for any group from the 8th grade, and up.

LET MY PEOPLE LIVE—deals with the human side of tuberculosis; that is, some facts and much inspiration, and is good for any group.

DIAGNOSTIC PROCEDURES—More for clubs and doctors—intended for physicians.

ON THE FIRING LINE—Historical: deals more with the definite measures and wide application of modern methods in the fight against tuberculosis.

Silent Films—16mm

STORY OF MY LIFE—Tuberculosis. For children.

CONSEQUENCES—For High School groups and young mothers. Deals with the importance of finding tuberculosis early and the need of hospitalization.

TUBERCULOSIS AND HOW IT MAY BE AVOIDED—Deals largely with the examination of children and childhood tuberculosis.

LET THE DOCTOR DECIDE—Two reels for physicians and for club members—men and women.

All these films may be had without charge, by responsible persons who have a good machine and an operator who will use them and see that they are returned without damage, other than the necessary wear of the film. The Kentucky Tuberculosis Association will pay the transportation to the applicant who is expected to pay the return transportation, always insured.

TB-LETS

If your doctor tells you that you have tuberculosis before any marked symptoms come, he has done you a great favor. You can get well at that stage. When symptoms show so plainly that the neighbors can guess, it is often too late.

To avoid colds keep your skin active. Don't overdress, don't underdress. Give the skin an active rubdown every day with a big towel, whether you bathe or not.

Colds are always "catching." The person who has one should keep it to himself.

Don't forget that the body needs fluid in winter as well as in summer. You can't keep well without moisture.

Tuberculosis is the leading cause of death between the ages of 15 and 45. That Christmas Seals do fight tuberculosis statistics will show.

1. Too easily tired, 2. continued cough and expectoration, 3. loss of weight, 4. loss of appetite. Such symptoms should call for medical attention immediately.



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CHILD HEALTH AND WELFARE

Mrs. Joseph E. Wier Louisville, State Chairman, Public Relations

QUESTION BOX

SEND US A QUESTION

We are inaugurating the question box this month to try to help mothers in their attempt to make a more intelligent study of their children. We all have problems we would like to take to authorities for an answer.

We now know that by the time a child enters school at the age of five or six years the trend of his body, mind, and social self is already set. This is the period during which parents (in actual practice, principally the mother) train the child. After entering school, even with the help of teachers and clinics, a mother should continue her study, for there are still problems all through adolescence for her to solve.

Mothers are awakening to the fact that nature has equipped them with only one prerequisite for child rearing—affection. But parental love is not enough. Love needs knowledge to guide it. There now is knowledge—scientific information—regarding not only the physical care, but, also, the mental, the emotional, and the social training of the child. Parents should know and apply the laws of behavior with just the same exactitude as they apply the laws of physical care.

If you want help, we would like to have you write us about your problems, and we will lay them before experts and try to answer you in the next issue.

The questions in this first "Box" were given by members of physicians' families. This month we are giving the names of the physicians and educators who have been so kind as to give us answers for our first questions.

QUESTIONS AND ANSWERS

What are a few of the most important books I could read to my children to instill a love of literature?

Answer: I don't know. So much depends on the child. Certainly Robinson Crusoe, Treasure Island, Ferdinand the Bull, etc., would be good for any child.

Do you think it important to read aloud to the child, and how early should it be started?

Answer: Yes! You can't start too early.

Do you find that pupils who have an early acquaintance with literature get more from their English Courses in the University?

Answer: Sometimes. So much depends upon the way in which they have been taught. The most valuable trait a child can bring to the University is a thirst for reading and the ability to read fluently. This is often ac-

quired easily at an early age, 6-15 years, but may be developed only with difficulty, later.

DR. DAVID MAURER,
Associate Professor of English,
University of Louisville

* * * *

Do you think giving cod liver oil or one of the vitamin contents without a doctor's prescription is wise? Mrs. C.

Answer: A doctor should be consulted about the quantity of any vitamin and the indications for vitamins before giving it to a patient. All cod liver oils are not strong in potency and it is possible that one may obtain an impotent cod liver oil.

Do you think giving cod liver oil helps children avoid colds? I can't see that it gives my four any immunity. Mrs. L.

Answer: Cod liver oil itself will not protect against colds. There is no definite drug to protect against colds. Healthy and vigorous people have fewer colds than other people and those colds that are contracted are milder and do less damage and last a much shorter time than colds that develop in people not so healthy and vigorous. Cod liver oil very definitely improves the general health in people and in this manner it is very definitely advantageous in the prevention of colds.

HARRY S. ANDREWS, M. D.

* * * *

What can we do to avoid acne?

Answer: Acne is a common, chronic, inflammatory condition of the skin involving chiefly the sebaceous structure, and characterized by oiliness, pimples, pustules, and blackheads. This eruption usually appears on the face, chest, and back of both sexes during the adolescent period, although it may begin at a later date. How can we avoid acne?

Since we know that this condition is most common during the adolescent period it is up to parents to see that their children do not indulge in excessive carbohydrates, especially candies, pies, pastries, and chocolate in any form; that their skin be cleansed with warm water and a mild soap; that constipation be avoided; and that no drugs be taken which contain bromides or iodides.

ROBERT L. KELLY, M. D.

* * * *

We are a group of Seniors in High School. We think we are in love, and want to get married as soon as we graduate. Our parents want

us to go to college, at least for two years. Which do you think best? Doctor's Daughter.

Answer: You should go to college by all means. You have not had enough experience with boys to be sure you are truly in love. You are going into the biggest job in the world when you marry. For homemaking and training the next generation, you need more preparation.

A great many practical aids to marriage are given at the university: Courses in Home Economics, Interior Decoration, Child Care, Consumer's Problem, and Budgeting.

You need more cultural broadening, you need to know more about the great philosophies. Married life isn't entirely the Paradise it looks to you now. You need something within yourselves to meet its problems. The Humanities give you knowledge in the great Arts, Music, Literature and Philosophies of all ages and lands. For your sake, your young man's sake, and your future children's sake go on to college if possible.

HILDA THRELKELD,
Dean of Women,
University of Louisville

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Historian's Corner

Mrs. V. A. Stilley, Benton, Chairman

MRS. GRAHAM LAWRENCE

It is with deep sorrow that we record the passing of Mrs. Graham Lawrence (Mary C.) at her home in Shelbyville, on Sunday, February 26.

Mrs. Lawrence will be remembered as the pioneer President of our Organization, being elected at the organization meeting held at Crab Orchard Springs, September 19, 1923. This office she graced for two consecutive years, holding the Auxiliary together during that formative period.

Mrs. Lawrence was an active member of the Daughters of the American Revolution, also. She served one term as State Regent.

We grieve for the loss of such a valued member. We grieve, too, because in her passing we are reminded that our chain is broken. Mrs. Lawrence is the first member of the official family of the State Auxiliary who has been taken from us.

We will secure a biography of her life for early publication and incorporate it in our files.

Here's something we didn't know before—that the first official board of health was founded by a Pope, and that this Pope was a doctor. He was John XXI, crowned Pope in 1276—a Portuguese and the son of a Lisbon physician.

Before becoming Pope, he was professor of medicine in the University of Siena and in this city he prepared and had passed the first recorded law for the regulation of public health. He also wrote a medical book "Thesaurus Pauperum" (Treasury for the Poor), in which he gave a collection of remedies for diseases of every part of the body.

Hospital Topics and Buyer.

Speaking of ancient notables who were interested in the gentle art of healing, we have learned in our random reading that Henry VIII was a pharmacist and had a little laboratory where he amused himself mixing medicines, in the intervals between mixing his marriages.

Further than this, his daughter, Elizabeth, the virgin queen under whom England grew to its greatness, dabbled in medicine, and was stated to be the most thoroughly educated woman of her time.

Hospital Topics and Buyer.

Learning depends on practice; intellect on former deeds.—The Sanscrit.

-:- SIGHT IS MIGHT -:-

HOW SIGHT IS BEING SAVED

In its endeavor to conserve vision and eliminate needless blindness, the National Society for the Prevention of Blindness, Inc., 50 W. 50th Street, New York City, is focusing attention upon:

1. Prevention of ophthalmia neonatorum (eye infections of newborn babies).

2. Urging that blood tests be made routinely early in pregnancy to discover if treatment is needed to protect the child from prenatal syphilis.

3. Demonstrating an approved method of testing the vision of pre-school children.

4. Cooperation with educational authorities in: (a) establishing sight-saving classes for children whose vision is so defective that they cannot safely use ordinary school equipment; (b) training teachers for this special work; (c) improving conditions affecting the vision of all school children.

5. Selection, training and placement of social workers in eye clinics and hospitals.

6. Cooperation with management and labor to reduce eye injuries and eyestrain.

7. Collaboration with doctors and others interested in securing accurate information about the causes of blindness.

8. Counseling individuals and groups interested in initiating and conducting local and state programs for the prevention of blindness.

MAMA LINDA SEES DAVID NOW— AND THEN

Linda Neville, Lexington.

"Mama Linda, can I see?" asked three-year-old David, whom I proudly call mine. Lying in his crib the other day during his mid-day rest period he had been passing the time away pleasantly now singing a line or two of **London Bridge** and the first words of **Holy Night, Silent Night**, now talking to himself with animation, now repeating without context and without comprehension certain long words of fascinating sound, even **Czechoslovakia**.

When he heard me come near his crib he asked the question, "Mama Linda, can I see?" And the pain of things pierced my very soul. "He does not," I reasoned with myself, "he does not yet know the meaning of that question. He is merely repeating the kind of question he has heard some child or some thoughtless grown person ask in his presence. If only God would take him before he can have even a vague understanding of the question and of the answer!"

"No, I do not mean that, I do not want him

to die. I want him to live. I want to have him always with me."

My impulse was to take him from his crib at that moment, to hold him tight, and to try to imagine that my arms could ward off from him any approaching sense of the futility of things, any distress that might ever threaten him.

When he woke up from his nap he said to me, as he has been saying to me many times a day these many months, "Mama Linda, love baby in the rocking-chair." And I let him climb upon my knees as I sat in the big rocking-chair. There he often bounces playfully up and down on my knees and says "Mama Linda, tell me about Christopher Robin, tell me about Peter Rabbit," but that day he was



Mama Linda and David

content to lie quietly in my arms, just as he lay quietly that August day when the accompanying photograph was taken.

And I had an opportunity for calm reflection. In a few years even with a vague comprehension of that question and of the answer, David would surely know that not to see is to be different from other children; that not to see is often, oh, so often, to stay still while other children run and skip and jump; that not to see is to learn about the immediate sur-

roundings by a slow fingering of every object while other children in some strange way learn about those surroundings all at once; that not to see means to stumble and to fall and to get hurt; that not to see is. . . but why describe the agony of it all?

"I want David to live on. Is that selfishness in me? Will the burden of life prove too heavy for him?

"No. I think not. David's beautiful body is strong, his health is almost perfect, his mind is fine, he has a keen sense of humor, a loving heart and his very soul is filled with music. He has in him many of the elements that make for true happiness, the happiness of the spirit. I believe he has been set apart for a mission more beautiful than I can envisage. His mission, as I faintly see it, will be with happy tread to follow God's leading through the long dark way, giving courage to others if they are blind. And too his mission will be to stimulate those of us who can see in order that we may do our best to prevent everywhere the great affliction of blindness.

"For the enriching of his own soul I want David to live. For the helpfulness he will render to others besides myself I want him to live." And I became calm as I sat there loving David in the rocking-chair. I had convinced myself that in wanting him to live I was not selfish.

And for the richness he brings to my life I want him to live, this baby boy who every day discloses to me some new charm. I often say, "David, what did Mama Linda say to you on your birthday," and with blissful look, with blissful voice he says in words already pretty clear to him from such repetition, "David is Mama Linda's blessing." Veritably this little blind baby boy is my blessing!

At the age of sixty-five I cannot hope to be here with David so very many years. Women of the Medical Auxiliary, will you not, each and every one of you, do what is possible to make our State of Kentucky a decent place for David and, as for that, for other young people to live in, without the lure of whisky and of vice on every side? And will you not, each and every one of you do what is possible to influence the Christian churches bravely to proclaim obvious wrongs and to try to represent the Christianity of Christ? I want David to be able always to find brave and true prophets of God.

And will you not cooperate with your husbands to the end that nowhere in Kentucky shall anyone be left to be blind for mere lack of opportunity to get skilled treatment? After thirty years of work I am chagrined at the paucity of opportunities for the prevention of blindness in Kentucky.

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tic Ice salesman, or stop by your
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writing contest. By merely writ-
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\$100.00. Weekly awards are made,
too. Its fun—its educational—and
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JANE TODD CRAWFORD MEMORIAL

SOME PLANTING RESULTS

Mrs. A. T. McCormack, Louisville.

What results followed the 1938 planting on the Jane Todd Crawford Trail?

Excellent, Very Good, Good, Fair, Satisfactory, Unsatisfactory, Poor. Just like school grades! Or—like any new project requiring cooperative effort of many people.

Was it worth the effort?

Yes, considered as a whole, it surpassed our expectations.

Why were not all results good?

The Parable of the Sower best answers this question. (Matt. 13:23).

What were some results?

Most outstanding, perhaps, was the excellent success in growing flowers by persons and families who had never before cultivated flowers. This occurred in each of the four counties through which the Trail passes (Green, Taylor, Marion, Boyle). The prideful thrill of success with a first flower garden is long retained.

Many of the expert, seasoned gardeners experienced adventure—some thrills, too, with strange seeds from faraway-flower-loving friends of the Jane Todd Crawford Trail—friends who had never visited Kentucky and who knew, personally, no one living on the Trail.

"So interesting" said Mrs. J. M. Barbee, Campbellsville, "to watch each new sprout develop, wondering 'Is it a flower seed I planted from British Columbia? Or just a Kentucky weed? Now, what are these tender young plants in this patch that I planted from Wisconsin? And—these from New Hampshire? I recognize the petunias from South Carolina, but what is this from Missouri?'"

Friendly intimate terms soon develop from flower cultivation, for

"A garden is a lovesome thing, . . .

. . . I have a sign:

'Tis very sure God walks in mine."

Mrs. Barbee reported that she had enjoyed the delightful privilege of keeping the Campbellsville Hospital supplied with fresh cut flowers throughout the blooming season from her allotment of seeds.

Mrs. W. O. Hopper, Perryville, reported success and delight in the gardens cultivated by several families to whom she had given seed. So, too, Mrs. O. M. Crenshaw and Mrs. W. H. Coleman, Lebanon, where several had planted along the sides of the highway. In some instances the flowers grew beautifully; in others the weeds choked them; frequently flowers and weeds grew together—often a beautiful combination!

Weed cutters of the Highway Maintenance Department in some places cut down flowers and weeds. In a few instances, we saw where weeds and flowers had been mowed down, but nearby weeds alone were left flourishing!

Of course, the needful thing is preventive treatment—weeding and cultivation when the plants are young, so that weeds will not gain possession of the earth. And—we live in the hope that preventive work may soon be undertaken.

Mrs. R. L. Durham, Greensburg, reported varying results: Beautiful gardens for some, disappointments for others. Persistent rains after the early seeds were planted were disastrous, for the seeds rotted in the ground. Mrs. Durham, however, planted a lot of seeds in boxes or seed beds, then distributed the young plants to folks along the Trail. These plants grew beautifully; also, window boxes and vines at the Jane Todd Crawford Library.

Perennials **ROSES** Bulbs

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JEFFERSON COUNTY MEDICAL SOCIETY

Mrs. Deana Shelby-Diehl, Danville, reported her greatest success was in seeds she had distributed to the Negroes living near the McDowell Home to the Recreation Center, developed under W. P. A. Flowers grew well and added greatly to the attractiveness of these neighborhoods.

Mrs. J. R. Sanders, Campbellsville, and others reported gratifying success from the seeds distributed to the gasoline filling stations. Flower beds, window and post boxes were developed at filling stations.

Mrs. W. O. Hopper was exultant—and rightly so—over the beautiful effect of tropical luxuriance achieved by a filling station near her house, where several utilitarian, but unattractive buildings, were completely hidden by a rich growth of castor oil plants.

Miss Mary Murphy, at the Jessietown school near Lebanon, together with her associate teachers and pupils, was greatly encouraged with results of their efforts to beautify the school grounds, notwithstanding some disappointments due to lack of cultivation and water during the long vacation. They have many plans for continued work. Earnest determination, such as they display, is bound to bring good results. We hope other schools will join the beautification project.

Iris was planted in several places in Marion and Green Counties in the spring, when the Kentucky Highway Department assigned three trained nurserymen to assist with highway planting. In October two of these men again assisted, planting forty bushels of iris—thirty bushels contributed by the Louisville Woman's City Club and ten bushels by Dr. W. O. Asbury, Campbellsville. Along the highway, beginning at the Jane Todd Crawford farm in Green County, and extending into Taylor County, poppy seed were sowed with the iris, and hollyhock seeds, back by the fence.

Eventually we hope to have iris planted on the highway all along the sixty miles from

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the Crawford Home in Green County to the McDowell Home in Danville. Iris blooms before the weeds grow high.

Other bulbs, tulips, narcissus, et cetera, plants, shrubs, and trees—many trees, native trees,—will add greatly to the beauty of the Trail.

The work of 1938 is but the beginning of beautification and development of the Jane Todd Crawford Trail. At least five years of persistent, consecutive work will be necessary before any very definite results can be expected. Our first hurdle is passed. We have planted the idea at various places along the Trail. Actual work has begun and has borne fruit. Passersby have seen the first evidences of our project—small and comparatively insignificant though they may seem. Now, all we need to do is “to keep on keepin’ on.”

One woman reported that her seeds, petunias, did not grow. Yet petunias seem to grow readily anywhere in Kentucky. In reply to a question as to how she planted the seeds, she said, “I powered the dirt up fine, made a little drill, planted, and covered them.” “How deep did you cover them?” “About four inches.” Next year, she will sow the seeds in the same well-prepared soil, but with only a light bit of cover.

Mrs. Edwards, Campbellsville, reported a rare experience: With her allotment of seeds, she called at every house in her district on the Jane Todd Crawford Trail, explained her errand of seed distribution, and offered a choice of her seeds.

At one modest little home, back a bit from

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the highway, she knocked at the door and was met by a frail little woman who listened to her statement without comment; seemed a bit incredulous, in fact. An embarrassing silence followed the conclusion of her story. Then, Mrs. Edwards asked her if she knew about Jane Todd Crawford, Pioneer Heroine of Surgery. She replied that she did not, neither did she know that the highway on which she lived was named The Jane Crawford Trail!

Finally, after explaining all this in brief detail, Mrs. Edwards repeated that she had brought her some flower seeds, collected by the Woman's Auxiliary to the Kentucky State Medical Association—the organization sponsoring the development and beautification of this highway as a memorial to the Pioneer Heroine of Surgery. Would she like to have some of these seeds and plant them in her own garden or down near the roadside in front of her home?

Wonderment giving place to understanding, the housewife dropped down into the chair just inside the door, exclaiming fervently, "You are an answer to prayer."

Wonderment was now on the outside of the door sill! Jane Todd Crawford's emissary longed for a chair to support her as she stood there in the doorway.

"An answer to prayer? Why, how am I an answer to prayer?" asked Mrs. Edwards.

In simple terms and with earnest directness, the housewife told her that early in the spring she had developed a longing, an insistent longing, for a flower garden. When she approached her husband on the subject, he sorrowfully said that he could not afford to buy flower seeds as he had barely enough money to buy the necessary seeds for the crops.

Day by day, as spring advanced, her eagerness for a flower garden grew. So also, grew her faith. And—with this faith she began to work.

One night when her husband came in to supper, he asked, "What are you going to plant in that bed near the house?"

"Flowers," she answered.

"But," he remonstrated, "as I told you, we can't afford to have flowers. I can scrape together barely enough to buy seeds for our crops! I haven't a penny for flower seeds. I'm sorry. Maybe next year 'twill be better."

"I'll pray," answered his wife.

"I did pray, kept right on praying. And I made a flower bed ready for the seeds. Now, here you are with flower seeds that you ask me to plant! You are the answer to my prayer."

A gloriously beautiful flower garden was the happy result that gladdened the eye and the heart of all who passed by the house of the woman who prayed—and worked while she prayed.

Will you try to plant more in 1939?

Yes. With more people interested, we are confident of better results this year.

With whom should one communicate in order to donate seeds, shrubs, plants, bulbs or trees for the Jane Todd Crawford Trail?

Mrs. A. T. McCormack, Chairman of the State Committee, Brown Hotel, Louisville, Kentucky.

JANE TODD CRAWFORD LIBRARY, GREENSBURG

Books and Magazines Received from Jefferson County Auxiliary.

Books and Magazines

If Winter Comes.....	A. S. M. Hutchinson
Great Works of Art and What Makes Them Great.....	F. W. Ruckstall
Time	20
Life	2
American	5
Ladies Home Journal.....	2
Saturday Evening Post.....	17
Pictorial Review	1
Harpers Bazaar	1
Colliers Weekly	3
News Week	4
Hygeia	6
Readers Digest	10
Good Housekeeping.....	1
Cosmopolitan	1

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MAGNOLIA 0772

WAS THERE A MOB?

Mrs. A. T. McCormack, Louisville

Many details in the experience of Dr. Ephraim McDowell and Mrs. Jane Todd Crawford during the development and the completion of the great experiment, the First Ovariectomy, are still unavailable to the public as authentically recorded facts.

Will you, who are interested in Kentucky history, or in medical history, please consider yourself a COMMITTEE OF ONE to delve into the past, find these facts, and record them for the benefit of future generations? This story in all its detail is too valuable to be lost.

Dr. McDowell stated in his own report, published in Philadelphia, that "two physicians called me in consultation."

Who were these two physicians?

Efforts to learn the names and addresses of these physicians have been unavailing to date. To learn who these men were might lead to many interesting and valuable steps in the medical history of Kentucky.

Who, if anybody, accompanied Mrs. Crawford on that hazardous trip from her home in Green County to Danville? There is no authentic record that she had a companion.

How did she cross Green River in December?

There was no way to reach Danville from her home until after she had crossed Green River, and there was no bridge across it at that time.

Where did she spend the nights on the trail?

Dr. McDowell reports that "she made the trip in a few days" on horseback. Days are short in December and cold in Kentucky, with snow and ice frequent contrasts to the bright winter sunshine.

We are eager to acquire all the facts concerning this epochal event.

Many persons, young and old, repeat stories they consider interesting, entertaining, probable, or advantageous with the introduction "They say": stories without any factual foundation or any reputable background—the whispering campaign method! Like the small snowball, as Johnny rolls it over and over in the snow to make his big snow man, these stories have grown to unbelievable dimensions as they have passed from one teller to another until at length, they have reached such proportions that the first narrator would never under any circumstances claim origination.

Is this not what happened in the development of the "Mob Scene" that persistently bobs up with the McDowell-Crawford story?

No earnest sincere student of the FACTS recorded about the McDowell-Crawford experiment has found any factual basis for the story of the "Mob Scene"! Sensation seekers always try to bring this into the story.

The repetition of a false statement or supposition does not make truth. And—truth is what we are seeking.

WILL YOU HELP US, PLEASE?



NATIONAL ORGANIZATION CHAIRMAN WRITES

Dear Doctor's Wife:

The purpose of this letter is to cordially invite every doctor's wife in this state to become a member of the Woman's Auxiliary to the Kentucky State Medical Association.

You should secure the approval of your County Medical Society, and request them to appoint an Advisory Committee of five before you proceed with definite organization.

Your work could be what you choose to make it. It would be worth while if only to promote good will among the families of the doctors.

There are, however, more important reasons for an Auxiliary in this day of changes in medicine.

Cooperation is essential for the proper guidance of health activity, in which the doctor's family must play an active part. This entire movement, of course, is sponsored by the American Medical Association.

A small due of One Dollar per capita per year would enable you to pay the 25c required by the National Organization, and the balance could be divided between your State and County to carry on the work you elect. A larger due is desirable so that Counties may have some capital for a working principal.

Health education is an important phase of the national program, and to further this work a committee of the Woman's Auxiliary has compiled study programs which have been approved by the Advisory Committee of the American Medical Association. The studies are most interesting and helpful to all women's organizations who are interested in health education. They may be procured from the Program Chairman of the National Auxiliary in limited numbers. They help in organization work as well as give a most comprehensive outline for study on preventive medicine and communicable disease.

If you feel that your group will be interested, I shall be glad to take this matter up with you in detail. Surely it would be an honor if you were to have the honor and pleasure of establishing an organization in your County, which would stand for the principles of better health, better cooperation and better understanding of the objective toward which the Medical Society and its Auxiliary are working.

Mrs. John M. Blades, Butler, Kentucky, State Organization Chairman, will be glad to come to your county and talk to you further concerning this subject of, "Why a County Auxiliary?"

Sincerely,

(Mrs. V. E.) HELEN D. HOLCOMBE,
1625 Quarrier St., Charleston, W. Va.

OUR BUSINESS

Mrs. Wm. H. Emrich, Louisville, Business
Manager

Advertising today is a real, live business. Its purpose is to compel purchasers to buy. Hence, advertisers have learned to act through appeal to the senses. They are willing to finance displays and exhibits where customers may see, taste, smell, hear and feel their wares. Your advertising and business managers in cooperation with the Quarterly's Advertisers have worked out a program which we believe will interest and entertain Auxiliary members, their families and friends and acquaint them with our Advertisers.

If clothes be your obsession, you will enjoy the Style Show. Our own Auxiliary women, with their crowning glory done in the latest hair-dos will wear dresses, hats, shoes and accessories selected from the shops of our Advertisers.

If your problem is food, its preservation, preparation or selection, our Advertisers will point the way to an intelligent solution.

For housekeepers, homelovers, parents and families there will be snappy talks and colorful displays attesting the merits of sixty seven advertisements.

You, your families and friends will be keenly interested in the Advertisers Bazaar which will be given at the Brown Hotel Monday, June 5th, at 1 o'clock. Come and enjoy the music and fun prepared for your entertainment and information.

A GARDEN

By Helen Welshimer

A CHILD should have a package
Of new seeds every spring
From which to raise a pumpkin
Or beets, or anything.
And with them goes a garden
Where he may pluck the weeds
That offer interference
To any kind of seeds.

A CHILD should gather beetles
While down upon his knees;
Watch cabbages and pea pods
Perform their mysteries.
His soul will stretch in stature
Inch after inch, I know,
If he may hoe a garden
And watch the turnips grow!

—Good Housekeeping, May, 1937.

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in Kentucky. Let us supply you

J. W. COWHERD & CO., Cadiz, Ky.



HYGEIA
Goddess of Health

LEARN MORE, SERVE MORE

Mrs. C. C. Turner, Glasgow, State Chairman

"Learn More, Serve More" is the theme adopted for the year by the members of the Sampson Community Hospital District Auxiliary. Might it not be a stimulating theme for all Auxiliary members?

How better learn more of what Auxiliary members should know?

Read the regular Quarterly Supplement to Kentucky Medical Journal.

Study the Hand Book published by the American Medical Auxiliary.

Read and study Hygeia each month.

Hygeia contains so much valuable scientific material that is pleasingly presented in simple English, together with many attractive illustrations.

Hygeia is the American Medical Association's own publication, prepared in answer to numerous requests from the general public for easily understood, authentic presentation of health facts.

The one request made of the Auxiliary by the American Medical Association is that the Auxiliary increase the circulation of Hygeia.

How many subscriptions to Hygeia have you personally, and how many has your Auxiliary secured for Hygeia during this last year? Each County Auxiliary is expected to secure or to provide a certain quota in most of the states. Why do not Kentucky counties keep in step in this Procession of Progress?

Sampson Community Hospital District Auxiliary has secured twenty-seven subscriptions. Five of these go to the public schools and one to the public library.

Will County Hygeia Chairman please send in their reports to the State Chairman, Mrs. C. C. Turner, Glasgow, before April 15 in order that these may be included in the National Report, which will be made at the Annual

Meeting of the American Medical Auxiliary May 15-19, in St. Louis.

Reports to be published in the July Quarterly should reach the Chairman by May 20.

RADIO WAVES

Mrs. S. H. Flowers, Louisville, Chairman

In observance of Doctors Day, a radio program is being developed, which will be heard over WAVE at 2:45 o'clock, on Thursday, April 13. This is to commemorate the 189th anniversary of the date on which Dr. Thomas Walker entered Kentucky through Cumberland Gap and built the first house of a white settler.

The attention of Auxiliary members is called to the Radio Dramatizations of early medical and public health history, given over WHAS by the State Department of Health at 4:45 P. M. each Saturday afternoon.

Listen-in Parties are growing for these programs, beginning March 4.

Has your Auxiliary a regular Listen-In Party to report these and other Health Programs to your own organization?



Nationally famed as smartest health shoes, the Archlock and Arch-Relief shoes offer you the latest whisper in modish styling, yet assuring you of proper fitting and studied comfort. Slip on the VERONA—it comes in black, brown, suede with contrasting trim. It has a Cuban heel \$8.95.

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-:- EDITORIALS -:-

SAY IT WITH FLOWERS

"Say It With Flowers," say the Florists!

Increasing numbers of cities, counties, and communities as well as individuals are accepting this suggestion. And, acting in accordance.

The Rose City, Portland, Oregon, is no longer unique in its acclaim of the beautiful flower that grows to perfection and in abundance along its city streets, and in its parks, and gardens. For, now, cities in widely scattered areas lay proud claim to distinction in the perfection of the cultivation of some particular flower.

Famous are Holland, Michigan, and Birmingham, Washington, as Tulip cities, and Nashville, Tennessee, as the Iris city.

Clearwater, Florida, calls itself the Petunia City. Here everybody plants petunias, glorying in the jewel box effect of the radiant colorings of this profusely blooming little plant. Along the street curbsings, in garden beds, porch and window boxes, and circling around the tall palm and other trees, one sees colorful petunias everywhere. An especially beautiful display is at the golf club entrance, where great banks of pink, purple, and white welcome visitors and golf enthusiasts with royal splendor.

Why not develop in our Kentucky cities this type of hospitality—nature's own—to add to the folksy, homey hospitality traditional in our beautiful state?

PHILATELY

A new idea for honoring the great and learned has developed in the reproduction of their portraits on postage stamps.

In the Panama Canal Zone, there is now a postage stamp featuring Dr. William Crawford Gorgas and in Cuba, a stamp honoring John Carter Finley, the Spanish-Scotch doctor, both of whom helped to conquer yellow fever.

In foreign countries, Egypt goes back to the time of the Ebers Papyrus and commemorates Imhotep and Amenhotep. Holland honors, among others, Boerhaave. Austria leads with stamps bearing the likenesses of Billroth, Auenbrugger, Skoda, and others.

Why does not the United States pay homage in this way to more of our great medical heroes?

Is not this a possible project for some of our Auxiliary members—and their husbands—who are interested in Philately?

SOUTH CAROLINA'S OWN MEMORIAL

South Carolina has adopted for its own within-the-state Memorial "Plan Five" from the Suggestions for Memorials, given at the close of the story, JANE TODD CRAWFORD 1763-1842, written by Mrs. T. R. W. Wilson in 1937, while she was Chairman of the Jane Todd Crawford Committee for the Southern Medical Auxiliary. Copies of this booklet may be secured by writing the present Chairman, Mrs. Luther Bach, Bellevue, Kentucky.

Mrs. Wilson reports:

"I am pleased to write you that the Executive Board of the South Carolina Medical Auxiliary, at the Mid-year Board Meeting held in Greenville, November 4, 1938, adopted "Plan Five." The first hospital in which the Jane Todd Crawford Memorial Bed will be placed is the new hospital recently opened at Seneca, Oconee County. This Memorial Bed will be used exclusively for indigent women who undergo an operation similar to that of our Surgical Heroine.

A new Memorial Bed will be placed in some hospital each year until all South Carolina Hospitals thus honor our Pioneer Heroine of Surgery.

A copy of JANE TODD CRAWFORD—1763-1842—donated by the author, will be placed near the Memorial Bed."

Another excellent form of memorializing The Great Experiment! What are other States doing?

WHEN THE DESIRE COMETH

Creative power is one of the divine gifts bestowed upon every human being. Some few are specially gifted with the ability to create many different types of things. Choice as to whether or not these creations shall be good and admirable, or otherwise, has also been bestowed upon each human being.

In every day life, each Auxiliary member finds a wide range for creative activities. Beginning with the home environment, which she may create as a comfortable, congenial atmosphere, nourishing not only the physical needs of her physician-husband and her family, but also their mental and spiritual requirements. Then expanding, perhaps, into the artistic realm. Here, she may excel in musical circles, either through performance or composition. Or, she may write a poem or a book that will prove to be a first seller. Or, as a painter, produce a beautiful portrait or picture. Of course, as a physician's wife, she has Auxiliary responsibilities and duties to perform, through which her creative urge may find ample expression. Possibly, she may lead in club work or in some constructive civic develop-

ment, beneficial to many. All have many possibilities.

It is amazing to see what exquisite beauty and usefulness can be developed from apparently impossible resources. Consider the potter and his clay! A trip to the Byebee Potteries in Madison County is revealing. The homely gray earth becomes a useful and beautiful pitcher under the deft fingers of the potter.

Thoughtful Michael Angelo furnishes a stimulating example in the story of his reaction as he gazed at a block of marble. Said he:

"Within you there are both beauty and ugliness.

Which comes out depends upon me."

Then, with his hammer and chisel, he fashioned from that blank block of stone a figure that has been an inspiration to thousands. Generations of men and women, in all conditions of life, from every country on the globe, have come to see what in the 15th century he called "an idea" that had been "imprisoned in stone."

TREES

Do We Realize the Value of our Trees?

The Rockefellers moved a 25-foot elm, 45 years old, from Connecticut to New York City, early in March of this year and planted it on the corner of Fifth Avenue and 51st Street at a cost of about \$1,275. According to press reports, "Pop-eyed Citizens Watch New York Tree Planting."

Mr. Nelson Rockefeller, supervising the job, expects to plant eight such trees between 48th and 51st streets, the only trees on Fifth Avenue.

Lordly giant elms once rustled in the breeze where those streets now run. But for the past several years business blocks have occupied all available space, and the only life discernable has been the busy activity of hurrying man and woman.

Kentucky, once a beautifully wooded land, presents now in many sections a sadly denuded aspect, since the trees have been ruthlessly destroyed. Erosion has followed and much of our good Kentucky soil has been washed down the creeks and rivers to make the fertile Mississippi Delta—and intermediary agricultural areas.

This is tree planting time.

Think what enrichment to Kentucky if this month every man, woman, and child would plant just one tree!

The child who is nervous and irritable may be suffering from lack of nutrition. Any child more than seven per cent below normal weight needs special attention and medical advice.

WHY?

Peace—a beautiful word!

Peace, a much discussed subject.

Peace, a condition for which mankind has aspired and struggled these thousands of years still, seemingly, a-far-off.

Yet, why not have peace?

It is so senseless to fight and kill.

Mothers, who must bear the children and be responsible for most of the rearing, are becoming more and more convinced of the futility of war.

What to do? A universal question throughout the ages!

Here is a thought-provoking question from deepest Africa: An English missionary in a chat with an old Negro cannibal of the tribe Niam-Niam, told him of the enormous number of victims of the World War.

"How could you," wondered the cannibal, "eat so much human meat?"

"We whites," answered the missionary proudly, "do not eat human beings."

"Well, then, what did you kill them for?" asked the cannibal in great astonishment.

—'Critic' in the New Statesman and Nation, London.

THE RIGHT OF SIGHT

THE RIGHT OF SIGHT by Gabriel Farrell, an interesting and informative article will be found in the July, 1937, issue of Hygeia.

Colored persons die from tuberculosis in greater ratio than whites; but it is more a matter of poor living conditions than racial weakness.

We are always complaining that our days are few, and acting as though there would be no end of them.—Seneca.

The important thing in life is to have a great aim and to possess the aptitude and perseverance to attain it.—Goethe.



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MINUTES OF THE MID-YEAR BOARD MEETING WOMAN'S AUXILIARY, KENTUCKY STATE MEDICAL ASSOCIATION

JANUARY 19, 1939

The second Mid-Year Executive Board Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was held in the Brown Hotel, Louisville, at 10 A. M., Thursday, January 19, 1939, with the First Vice-President, Mrs. John M. Blades, Butler, presiding. The President, Mrs. Harlan V. Usher, Sedalia, was unable to attend this meeting because of the critical illness of her mother. A quorum was present.

The invocation was offered by Mrs. J. B. Shacklette, Jeffersontown.

Roll call was answered by 6 Officers, 8 Committee Chairmen and 2 County Presidents.

The Minutes of the Post-Convention Board Meeting were read and approved.

The President's Message and the Achievement Project for County Auxiliary Development, printed in the January issue of the Quarterly, were read and discussed.

The following reports were given:

County Presidents:

The Hardin County report was read by Mrs. R. T. Layman, Elizabethtown. Reports from Breathitt, Graves and Madison Counties were read by the Secretary.

Officers:

First Vice-President—Mrs. John M. Blades.

President-Elect—Mrs. R. T. Layman.

Treasurer—Mrs. Luther Bach, Bellevue, reported a balance of \$155.65 in the checking account, \$64.45 in the Savings account, \$34.02 in the Jane Todd Crawford Fund and 231 Paid Members.

Committee Chairmen:

Doctor's Shop—Mrs. J. B. Lukins.

Hygeia—Mrs. C. C. Turner's report read by Secretary.

Jane Todd Crawford Memorial—Mrs. A. T. McCormack reported a balance of \$34.02 in the Jane Todd Crawford Fund and asked for sug-



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gestions for its use. Mrs. J. B. Shacklette moved that it be put into Postal Savings. Seconded by Mrs. P. E. Blackerby, Louisville, and carried. A motion by Mrs. R. T. Layman, seconded by Mrs. Luther Bach that the Chairman write to the W. P. A. Headquarters requesting that all Pack Horse Libraries in Kentucky be named Jane Todd Crawford Libraries, carried.

Organization—Mrs. John M. Blades reported that Lawrence County is being organized and Mrs. J. B. Lukins added that an effort is being made to reorganize Mercer County. A motion by Mrs. A. T. McCormack, seconded by Mrs. J. B. Shacklette, that the Secretary write Mrs. Wallace Chapman, Harrodsburg, Mercer County, and Mrs. H. F. Hays, Louisa, Lawrence County, asking if these counties have completed organization, sent their dues to the Treasurer and their list of Officers and Committee Chairman to the President and to the Editor of the Quarterly, carried.

Program—Mrs. Stephen C. McCoy asked that a special effort be made to finish the Handbook for State Presidents before the next State Meeting. A motion by Mrs. A. T. McCormack, seconded by Mrs. Stephen C. McCoy, that the Secretary ask each Officer and Committee Chairman to offer her suggestions for the best conduct of her office, in written form; this to be sent to the Secretary who will then give these suggestions to the Handbook Editors, carried.

Public Relations—Mrs. Joseph E. Wier.

Radio—Mrs. Samuel H. Flowers brought four proposals for the observance of Doctor's Day. A motion by Mrs. A. T. McCormack, seconded by Mrs. Stephen C. McCoy, that April 13th, the day Dr. Thomas Walker first entered Kentucky, be designated as the day to observe

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Doctor's Day, carried. Motion by Mrs. A. T. McCormack, seconded by Mrs. L. E. Smith, Louisville, that the type of program and the time for presentation be selected by the Chairman, carried.

Tuberculosis—Mrs. L. E. Smith.

Editor of the Quarterly—Mrs. A. T. McCormack.

Business Manager of the Quarterly—Mrs. William H. Emrich's report read by the Editor. A motion by Mrs. A. T. McCormack, seconded by Mrs. Stephen C. McCoy, that a rising vote of thanks be given Mrs. Emrich for her splendid work as Business Manager and a note of thanks and best wishes for a speedy recovery from her illness be sent by the Secretary, carried.

Advertising Manager—Mrs. Joseph E. Wier.

Dr. James Robert Hendon, Louisville, was presented and urged the Auxiliary to observe Social Hygiene Day, February 1, 1939. Dr. Hendon's interesting talk was followed by a Question and Answer period.

A superfluous clause in the Constitution and By-Laws (regarding dues payable to Southern Medical Auxiliary, no longer required) was brought to the attention of the Board and a motion by Mrs. A. T. McCormack, seconded by Mrs. R. T. Layman, that the Parliamentarian prepare an amendment to be presented at the next Annual Meeting, carried.

The Chairman announced that she had just received a wire from the President expressing best wishes for a successful meeting. An expression of deepest sympathy was sent to Mrs. Usher by the entire Board.

Adjourned—1:10 P. M.

(Miss) GRACE STROUD,
Recording Secretary.

News From The Counties

CAMPBELL - KENTON

Miss Pauline C. Haley of Fort Mitchell has been appointed as a laboratory technician in the United States Maine Hospital, Norfolk, Virginia. Her work began December 27, 1938. Miss Haley writes that her work is very pleasant. She wishes to continue her membership in the Auxiliary and hopes to attend the Bowling Green meeting.

FRANKLIN COUNTY

The Woman's Auxiliary to the Franklin County Medical Society met on January 11, 1939. After having been inactive for several months, every member present seemed very enthusiastic to be at work again. There was a desire, not only to continue with the Organization, but to develop more interest among the members.

It was decided to have regular monthly meetings on the second Thursday evening of each month.

New officers were elected as follows:

President—Mrs. Joseph Barr

First Vice-President—Mrs. C. E. Youmans

Second Vice-President—Mrs. F. M. Travis

Third Vice-President—Mrs. R. D. Barton

Treasurer—Mrs. R. M. Coblin

Recording Secretary—Mrs. Edward K. Martin

Corresponding Secretary—Mrs. Reba Burrow Flynn

Committee Chairmen: Legislative—Mrs. Eleanor Offut; Jane Todd Crawford, Mrs. Matthew C. Darnell.

(Other appointments reported too late for April Issue—will be reported in July.)

AWNINGS

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GRAVES

Jane Todd Crawford Day, December 13th, was observed by the Graves County Auxiliary with a covered dish luncheon at the home of Dr. W. J. Shelton and Mrs. Shelton, on South Seventh Street, Mayfield. Christmas suggestions were evident in the decorations and in the delicious refreshments.

A Business Meeting followed the luncheon with Mrs. J. H. Shelton, the President, in the chair. Officers elected, all of Mayfield, were: Vice President—Mrs. Ray Pryor; Corresponding Secretary, Mrs. W. T. Vaughan; Historian, (Re-Elected), Mrs. George T. Fuller; (President and Secretary-Treasurer were elected at previous meeting). Committee Chairmen appointed were: Jane Todd Crawford, Mrs. M. W. Hurt, Mayfield; Public Relations, Mrs. H. V. Usher, Sedalia; Tuberculosis, Mrs. H. H. Hunt, Mayfield. Honorary Membership was conferred upon Miss Margaret Lee Flynn, Mayfield, great granddaughter of the late Dr. S. J. Matthews. Miss Flynn is the society editor of the local newspaper and is, also, active in religious and civic interests of the community. Mrs. Laura Stokes Skinner, daughter of the late Dr. Stokes, Farmington, was made an Honorary Member at the September meeting.

A box of toys was packed for the Frontier Nursing Service for Christmas distribution.

Graves County Auxiliary is proud of the honor of having one of its Members serving now as President of the State Auxiliary, Mrs. H. V. Usher, Sedalia. She gave an excellent resume of the Annual Meeting of the Southern Medical Auxiliary held in Oklahoma City last November when Kentucky's President, Mrs. Luther Bach presided, and when in her honor, Mrs. Usher was privileged to pay over to the Jane Todd Crawford Memorial Fund of the Southern Medical Auxiliary, the One Thousand Dollar contribution of the Kentucky Medical Auxiliary, collected during the past ten years from Auxiliary Members and friends.

The special feature of this meeting's observance of Jane Todd Crawford Day was the graphic presentation of the Dramatization of the Jane Todd Crawford story, written by Mrs. S. H. Flowers, Louisville, which left a vivid picture of the great event with every Member present.

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Dr. L. G. Colley and Mrs. Colley, Farmington, were hosts at their home for a happy Christmas Eve Dinner, December 24th. Present were: Dr. and Mrs. A. B. Colley, and children, Tompkinsville; Dr. and Mrs. J. M. Mayer, Mayfield; Dr. and Mrs. J. Andrew Mayer and daughter, Fort Worth, Texas.

Dr. and Mrs. R. G. Ashley are back home in Mayfield, following six weeks spent in Chicago, where Dr. Ashley took a course in eye, ear, nose and throat work.

Mrs. H. V. Usher, Sedalia, has our sympathy in the passing of her mother, Mrs. Amos K. Jones, at her home January 22nd.

Dr. H. V. Usher and Mrs. Usher were called to Frankfort, February 23rd by the serious illness and operation of their daughter, Mrs. Chas. R. Pittman, who is now improving rapidly.

Mrs. Usher remained until March 12th and enjoyed the pleasure of attending the meeting of the Franklin County Auxiliary on March 9.

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HARDIN

The Auxiliary held its annual all-day sewing on Jane Todd Crawford Day, December 13, at the home of Mrs. William R. Bethel. Those present were Mesdames E. E. Johnston, L. P. Herd, J. M. English, Garnett Bale, H. R. Nusz, Walter Scott, S. P. Bale, George Bradley, R. T. Layman, and Joe M. Fowler. Guests were Mesdames Claud Moser and Vernon Brown.

A "pot luck" dinner was served by the ladies.

The secretary, Mrs. J. I. Taylor, read an interesting paper.

Eleven pairs of pajamas, four sheets, six pillow cases were made and six dolls dressed. Part of the articles were placed in the annual Christmas box, which was sent to Hazelwood, State Tuberculosis Sanitarium, Louisville. The remaining articles were distributed among the indigent tuberculosis sufferers cared for in the county.

Milk is furnished to one underprivileged family in the county.

The carnival was very successful. About \$40 was cleared. The Auxiliary is sending \$10 to the Quarterly and hopes to have more to send in the spring.

Dr. Millard Bethel, son of Mr. and Mrs. W. R. Bethel, has accepted a position with the State Board of Health at Concord, N. C.

The Auxiliary took an active part in the sale of Christmas Seals and is most appreciative of the cooperation from the young people of the community.

The heartfelt sympathy of all Auxiliary members goes out to the secretary, Mrs. J. I. Taylor, in the loss of her husband, Dr. J. I. Taylor, who passed on January 27, 1939, after a short illness.

Hardin County Auxiliary hopes to make a donation to the Jane Todd Crawford fund soon; also to the Doctors Shop in Harrodsburg. Surely there is a great deal of material that can be gathered up for that purpose, when the object is fully understood.

JEFFERSON

An enjoyable luncheon was given by the Louisville Tuberculosis Association, honoring Mrs. J. F. Dusch, Booth Chairman of the Christmas Seal sale, and her co-workers at the Canary Cottage January 17. Mrs. Ruth B. Terrell, Executive Secretary, acted as Hostess, assisted by Mrs. Harrison and Miss Loeiler, visitors.

Present were Mesdames Stephen C. McCoy, Charles Moore, F. C. Ogden, Curt Krieger, Oscar O. Miller, Walter I. Hume, J. Rivers Wright George A. Hendon, Lamar Neblett, J. W. Fitzpatrick, William M. Fallis, H. C. Hermann, James S. Lutz, H. M. Mathiesian, R. N. Holbrook, Arch Herzer, O. H. Kelsall, R. T. Hudson, W. K. Kinnaird, J. M. Keaney, H. W. Venable, Misses Grace Stroud and Viola Fitzpatrick.

A tea was given Thursday, January 12, by the Jefferson County Auxiliary, in honor of the wives of the internes and other prospective members, in the office of the Commissioner of Health, Dr. A. T. McCormack, at the State Health Department. In the receiving line with Mrs. P. E. Blackerby, President, were a number of the past Presidents: Mesdames J. D. Gibbs, H. L. Leaveil, G. A. Hendon, John B. Freeman, William Fallis, J. D. Hancock, S. C. McCoy, and Miss Grace Stroud.

Presiding at the tea table were Mrs. W. M. Gardner, wife of the President of the State Medical Association, and Mrs. Oscar O. Miller, wife of the President of Jefferson County Medical Society.

The guest book was in charge of Mrs. J. Paul Keith.

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HY-KLAS

Congratulations were in order shortly after the New Year when, into this family circle, Dr. Philip F. Barbour and Mrs. Barbour welcomed a little grand-daughter, Elizabeth Bodley Maxon, born at St. Joseph's Hospital, Lexington, January 4, the daughter of Dr. Wm. T. Maxon and Mrs. Maxon—formerly Miss Catherine Barbour.

LAWRENCE

In observance of Jane Todd Crawford Day, the wives and mothers of the doctors of the Lawrence County Medical Society met at the home of Mrs. J. W. McNabb, December 13, and organized the Woman's Auxiliary to the Lawrence County Medical Society, with Mrs. L. S. Hayes, president; Mrs. J. W. McNabb, vice-president; Mrs. L. C. Wray, secretary-treasurer; Mrs. G. J. Carter, historian; Mrs. A. M. Lyon, corresponding secretary, and the following as members of the advisory council: Dr. L. S. Hayes, Dr. L. C. Wray, and Dr. J. W. McNabb.

Salad course and coffee were served to the following members: Mrs. L. S. Hayes, Mrs. J. W. McNabb, Mrs. W. W. Wray, Mrs. L. C. Wray, Mrs. G. J. Carter, Mrs. W. E. Queen, Mrs. A. M. Lyon, and Mrs. G. W. Chapman.

Since the organization meeting, three other interesting meetings have been held.

The Auxiliary regrets the resignation of Mrs. A. M. Lyon, corresponding Secretary, who has moved to Hopkinsville where her husband is now Superintendent of The Western Kentucky State Hospital.

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LICKING VALLEY DISTRICT

At the December meeting of the Auxiliary to the Licking Valley Society, which convened at Erlanger, the following officers were elected:

President—Mrs. John E. Dawson, 70 Taylor Ave., Ft. Thomas.

Vice President—Mrs. Mark Yelton, Burlington.

Secretary & Treasurer—Mrs. Wilbur Houston, Erlanger.

The program consisted of:

A review of "The Horse and Buggy Doctor" by Mrs. H. Clay White, Covington.

Round Table Discussion of "Socialized Medicine," led by Mrs. Luther Bach.

Report from the Auxiliary to the Southern Medical Society that met in Oklahoma City in November, by Mrs. John M. Blades, Butler.

Members of the Butler Woman's Club plan to cooperate with Dr. Lucius E. Smith in his presentation of the problems of controlling tuberculosis to the students and public of Pendleton County.

At the last meeting of the Butler Woman's Club, Mrs. John M. Blades read a magazine article from the Quarterly in regard to Jane Todd Crawford.

Dr. Kenneth L. Stratton and Mrs. Stratton recently moved from Alexandria to Harlan County.

Mrs. John M. Blades, Butler, has been appointed by Mrs. W. K. West, President of the Southern Auxiliary, to be Councilor from Kentucky for the term from 1938 to 1941. The duties of this office are to attend the Executive Board meetings and to give reports of activity from the State Auxiliary.

Dr. H. Clay White and Mrs. White, Covington, and Dr. J. Asher Caldwell, Southgate, spent a few weeks in Florida.

Dr. O. W. Brown, of Lennoxburg, accompan-

ied his daughter, Mrs. Robert Sharon, to Christ Hospital, Cincinnati, and remained there with her a few days.

The March meeting of the Auxiliary to the Licking Valley Medical Society was held at the Baptist Church at Dry Ridge. Nine Members representing five counties—Boone, Bracken, Campbell, Grant, Kenton—were present and enjoyed an instructive program by a round table discussion on Socialized Medicine.

Mrs. Luther Bach read a paper on Socialized Medicine at the meeting of the Dayton Woman's Club, held at her home, February 27th.

Miss Alma Jean Bach, daughter of Dr. Luther Bach and Mrs. Bach, Bellevue, was recently initiated into the Alpha Omicron Pi Sorority at Denison University, Denison, Ohio. Congratulations, Miss Jean!

MADISON

Three young doctors and their wives have joined us since the beginning of our fiscal year: Dr. and Mrs. Harvey Blanton, natives of Richmond. He will do general practice. Dr. and Mrs. Paul Emrich formerly lived in Louisville. He confines his practice to the eye, ear and nose. Dr. and Mrs. Charles Billington come to us from the western part of the state. Dr. Billington is now director of our County Health Department.

Dr. and Mrs. L. C. Coleman have moved to Harrodsburg. Dr. Coleman will be associated with his brother in general practice.

Mrs. Harvey Blanton, who succeeded Mrs. Coleman as Tuberculosis Chairman of Richmond, is leading her committee very actively in tuberculosis work in Madison County, co-operating with the Health Department and the Elks Lodge. Case histories of families and associates of positive re-actors in the public schools are being secured by members of the Auxiliary under the supervision of Dr. Billington, County Health Director.

The best way to cure a stubborn cough is to go to bed and stay there. A day or two of complete rest will work wonders.

SAMPSON COMMUNITY

The Woman's Auxiliary to the Sampson Community Hospital District met January 10th, 1939 at 1:30 P. M. with Mrs. C. C. Turner. This was a business meeting at which we distributed the literature for the Tuberculosis essays in our schools; also, discussed plans for future meetings. We enjoyed a short social hour after business.

Dr. and Mrs. Tim Lee Carter of Tompkinsville are in Chicago where Dr. Carter is taking Post Graduate work.

Our Auxiliary contributed several books, magazine subscriptions and cash for the new library for the Graded School at Glasgow.

Miss Mildred Howard, daughter of Dr. and Mrs. C. C. Howard is in Columbia University for this semester. Her many friends enjoyed hearing her broadcast over WHAS, Louisville, before she left.

The Auxiliary met February 21st, 1939 with Mrs. B. G. Dickinson at her home on West Washington Street. There were ten present. After a short business meeting Mrs. J. J. Adams read a very interesting paper on Causes and Prevention of Tuberculosis. Our hostess served tea.

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 1938-1939
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 Like the airships that sail on silver
 wings,
 But today a wonderful thought
 In the dawn was given
 And the stripes on my robe,
 Shining from wear, were suddenly
 fair,
 Bright with a light falling from
 Heaven—
 Gold and silver and bronze lights
 From the windows of Heaven.
 And the thought was this;
 That a secret plan is hid in my hand,
 That my hand is big, big because
 of this plan,
 That God, who dwells in my hand,
 Knows this secret plan,
 Of the things He will do for the
 world
 Using My Hands."

THEME—Learn More—Serve More

JULY—

"Venereal Disease" Dr. C. R. Markwood
 Hostess Mrs. Clifton Richards

AUGUST—

"Crippled Children" Miss Peak
 Hostess Mrs. J. W. York

OCTOBER—

State Meeting in Louisville

NOVEMBER—

Reports of State Annual Meeting... Mrs. Clifton Richards
 Mrs. C. C. Howard
 Hostess Mrs. Eagle Bushong

DECEMBER—

Dramatization—"Jane Todd Crawford"
 Report Southern Medical Auxiliary... Mrs. C. C. Turner
 Wrap Christmas Packages for Hazelwood
 Hostess Miss Marian V. Black

JANUARY—

Collecting of linens and necessities for indigent
 tubercular patients
 Hostess Mrs. C. C. Turner

FEBRUARY 21—

"Prevention and Treatment of Tuberculosis".....
 Mrs. J. J. Adams
 Hostess Mrs. Bartlett Dickinson

APRIL 4—

"Cancer Control"..... Dr. C. C. Turner
 Place—Norris Nurses Home

MAY 16—

"Pioneer Doctors"
 Green County Mrs. J. C. Graham
 Cumberland County... Mrs. J. A. Dixon, Mrs. W. F. Owsley
 Mrs. H. G. Davis, Mrs. C. M. McGee
 Clinton County Mrs. Peery Slans
 Packhorse Library Miss Davenport
 Luncheon—Cherry's Coffee Shop.

JUNE 27—

"Pioneer Doctors"
 Metcalfe County... Mrs. E. S. Dunham, Mrs. S. R. York
 Allen County..... Mrs. John Harlin, Mrs. C. G. Pollis
 Monroe County... Mrs. George Bushong, Mrs. H. B. Ray
 Mrs. Eagle Bushong, Mrs. C. C. Turner
 Election of Officers
 Hostess Mrs. C. R. Markwood

AUGUST 8—

"Pioneer Doctors"
 Hart County..... Mrs. J. W. York, Mrs. J. J. Adams
 Mrs. W. A. Weldon
 Barren County... Mrs. Dickinson, Mrs. Norris Warder
 Mrs. Clifton Richards

**PROCEEDINGS OF THE SIXTEENTH AN-
 NUAL MEETING OF THE WOMAN'S AUXIL-
 IARY TO THE KENTUCKY STATE MEDICAL
 ASSOCIATION, HELD AT LOUISVILLE,
 KENTUCKY, OCTOBER 3, 4, 5, 1938**

(Continued from January Issue)

ADDRESS OF WELCOME

Mrs. P. E. Blackerby, Louisville

The Jefferson County Auxiliary has extended cordial welcomes before, and today I am reminding you that these welcomes have accumulated interest, and we are, therefore, more privileged than ever to have you with us. We hope you will have a profitable time and a delightful visit. All privileges and pleasures of Louisville are extended to you in full measure.

The Jefferson County Auxiliary shares with you the pride we all have in our Quarterly Bulletin, and you will have observed that our Jefferson County Auxiliary has contributed much to the success of this. We hope that you and your doctors have utilized the material in the Bulletin to enlighten the public on matters pertaining to organized medicine and medical public service.

For just a few minutes I want to engage your interest in some of the outstanding things that have distinguished Louisville in its recent years of progress; I know these will hold your attention.

First, I just want to remind you that two of Louisville's most distinguished physicians have been honored at the same time, one with the presidency of the American Medical Association, the other the presidency of the American Public Health Association, and I know you join with us in the pride we have in the contributions these two men have made to the nation-wide plans for medical coordination with National Social Security. The Jefferson County Auxiliary within the last year has capitalized on the availability of Drs. Irvin Abell and A. T. McCormack, along with other prominent members of the Jefferson County Medical Society in having them bring to the Auxiliary in four consecutive meetings all the up-to-date facts about medical progress in national affairs. These meetings were largely attended and of extreme value to us.

Another fact that will interest you is the securing of national recognition through the splendid progress made by the Louisville City Health Department under the leadership of

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Dr. Hugh R. Leavell, the son of our own Mrs. Hugh N. Leavell. This health department tied in leadership for the National award for successful public health administration and received further honorable mention in regard to its splendid venereal disease control program. The Jefferson County Medical Society by its cordial cooperation has made this recognition possible.

You will be glad to have me remind you that the distinguished ex-Mayor of Louisville, Mr. Neville Miller, has attracted public attention to Louisville by his excellent leadership during the flood and has also received national recognition in having been made Director-General of the radio industry of this country.

Thus we remind you of the recognition of some of our most distinguished Louisville citizens and now will call your attention briefly to some features of our civic life which indicate fine progress in recent years.

The further development of our \$2,000,000 municipal airport, Bowman Field, at a cost of \$500,000 by doubling the size of the administration building and the construction of several miles of 100-foot wide concrete run-ways.

The development of the cigarette manufacturing industry in Louisville today ranking the city third among American cities as a cigarette producing center, and fourth among American cities as a producer of manufactured tobacco, excluding cigarettes.

The development of the University of Louisville to an enrollment of almost 4,000 students, with the new law school building under construction.

We now have in Iroquois Park an open-air amphitheatre which seats approximately thirty-five hundred people and which, during this past summer, brought to Louisville four of the most popular of the light operas; on each occasion the amphitheatre was filled to capacity. We hope each of you will have opportunity next summer to visit Louisville during the opera season and enjoy these productions.

You will have a part this week in dedicating the new State Board of Health building, which

will be in memory of Dr. J. N. McCormack, one of the greatest pioneers of public health. This building is, of course, the home of the Kentucky State Medical Association and the State Health Department. The citizenship of Louisville, and particularly the medical profession, are proud of this medical and public health center, which cannot be excelled in this country.

Another thing of much interest to visitors to Louisville is the Federal Housing Project, of two units, one for whites and the other for colored. These are modern in every detail, with the cost so reasonable as to bring home conveniences to families who have not enjoyed such privileges before. Another large housing project is already under way.

Louisville has made fine progress in public safety, and again you will be proud with us in the record made this year in the smallest number of fatalities for many years; we passed sixty-five days in consecutive order without a single fatality. Our one-way traffic is proving successful and you will be the beneficiaries of our traffic system and finely trained traffic officers. We want you to feel safe and be safe while visiting here. You will note that we have two broad traffic lanes into Louisville, and there are more to follow.

It is hardly necessary to remind you that Louisville has one of the most attractive park systems in the United States, where recreation and scenery combined make them almost perfect.

If I were permitted the time, I could describe more of the advantages of our beautiful city and call your attention to its progress and opportunities, but this is not allowed. Please come often, stay long, and see for yourselves more of our cordial welcome and the opportunities Louisville affords for enjoyment.

A man without decision can never be said to belong to himself; he is as a wave of the sea, or a feather in the air which every breeze blows about as it listeth.—John Foster.

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ARCHIVES COMMITTEE

Newspaper clippings and written reports of the activities of the various counties as well as the publicity of the annual meeting in Richmond have been collected and placed in a scrap book. The following counties have sent material—Hardin, Jefferson, Licking Valley District, Nelson and Sampson Community Hospital District.

The State Historian, Mrs. Van A. Stilley, has sent numerous clippings of interest for the Archives. A bound copy of the Woman's Auxiliary Section, Part II, Kentucky Medical Journal, was received at the Mid-year Board Meeting.

An Exhibit, consisting of the Scrap Book, a poster displaying four issues of the Quarterly, a Scrap Book on Medical Economics prepared by Mrs. Joseph E. Wier, chairman of the Study Class of the Jefferson County Auxiliary, and a sample layette, was sent to the Exhibit of the Woman's Auxiliary to the American Medical Association held in San Francisco, June, 1938.

All of the Archives which I have accumulated, with the exception of this exhibit, were placed in the Filson Club in Louisville for safe keeping. The attached letter is an acknowledgment of the material placed there.

Respectfully submitted,
GRACE STROUD

Louisville, Ky.
September, 24, 1938

Woman's Auxiliary to the
Kentucky Medical Association,
Miss Grace Stroud, Chairman Archives,
424 East Lee Street,
Louisville, Ky.

Dear Miss Stroud:

I have been a long time acknowledging your LOAN to the Filson Club, but I will have to plead too much work to do it all, but hope to do better in the future.

You have placed in our hands as a loan, but for use of those using the library, the following:

Scrap book, 1930-1934

Scrap book, 1934-1935.

Scrap book, 1936

Scrap book, 1937

Kentucky Medical Journal—Part II,



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Woman's Auxiliary Section, Vol. 4, 1935;
Vol. 5, 1936; Vol. 6, 1937

Typed Biographical sketches,

Dr. George Wood Bayless

Dr. Walter Brashear

Dr. Daniel Drake, by Dr. Horine (Printed)

Dr. Bernard Gains Farrar

Dr. J. W. Hill

Dr. J. N. McCormack

Dr. Reuben Saunders

Dr. Wm. B. Stokes

Dr. John J. Wakefield

Dr. W. S. Young

Dr. Bryon R. Young

Dr. Sam Young

Dr. John Young Brown

(the last four included in "Four Doctors of
the Family of Youngs.")

Pioneer Doctors of Marshall County,

Pioneer Doctors of Mercer County,

Report of the Research Committee of the
Woman's Auxiliary to the Southern Medical
Association on Early Medical Educa-
tion.

For each item in this loan we thank you and assure you we will take our best care of the material that we know. Of course if anything unforeseen such as theft or fire, which we do not expect and have not yet experienced, should occur we cannot be responsible. We say this so that you understand our terms of acceptance of a loan. This loan, we agree, can only be withdrawn by the President or Secretary of the Woman's Auxiliary to the Kentucky State Medical Association.

With appreciation, I am, Yours very truly

Ludie J. Kinkead, Curator

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ANNUAL REPORT CANCER CONTROL COMMITTEE

Our work during the past year, as during the immediate preceding ones, has been largely one of cooperation with the Kentucky branch of the Woman's Field Army of the American Society for the Control of Cancer. We have aided them not only in the annual membership drive but during the entire year in educational work and other activities. We feel that considerable progress has been made but the hundreds of deaths each year in Kentucky from cancer alone show that our task is far from completed.

It is a question in our mind, however, as to how much good more intensive publicity over the radio or before various clubs will accomplish. Most of the people who can be contracted by these means have heard our message several times. What seems most important to us now is to evolve some plan to bring an understanding of our problem to the lower classes and to the Negroes who have been particularly slighted in this regard. We are frank to admit our inability, so far, to map out a campaign to reach them.

We feel that the most important thing we can offer in this report is the realization that this situation exists. We hope that some of you hearing this plea will be able to offer a constructive method of attack.

Before closing we want to thank all of you who have helped us directly or indirectly, officially or unofficially. No one realizes better than we that had it not been for your aid our contributions to cancer control in Kentucky would have lagged behind as time marched on.

Respectfully submitted,

(Mrs. J. D.) MARIE SEELBACH HANCOCK,
Chairman

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CHILD WELFARE

Since so much attention is being paid to the health of our children through clinics and health education we have tried to introduce our members to an additional trend of thought this year, namely, the ethical standpoint. We would continue our interest in health education by all means. Who of us is not aware of the many articles now written about the neglect of moral training. To this end I have written to all the presidents of our various county auxiliaries urging them to introduce to their members two very worthwhile magazines, "Child Study" and "Parents' Magazine." I have been informed that several were using these and considered them very worth while. I hope much has been accomplished if these publications have been made available and their many fine articles on Child Welfare freely discussed. I wrote to the publishers asking for sample copies to be sent to the various societies. Shall we not continue our interest and try to create a community consciousness for the protection of the children?

(Mrs. J. Paul) MYRTLE M. KEITH

THE DOCTORS SHOP

Recently the Doctors Shop has been renovated; the plastering mended, woodwork painted white, inside and out, floors sanded, shellacked and waxed. It is now ready for the Venetian blinds, donated by the Mercer County Auxiliary and two show cases promised by Mr. Bailey Wootton, State Park Commissioner. In these cases we will display some of the interesting things we have collected in the last four years. I have had much correspondence about the shop with Mr. Wootton and the Harrodsburg members of my committee, Mrs. Greene Johnson and Mrs. C. B. VanArsdale. Mrs. Robards of Harrodsburg has given several antique chairs. Books, andirons and some very old tongs for a fireplace have been promised. Mrs. McCormack gave a picture of William Harvey, an English physician, scientist and teacher, discoverer of the circulation of the blood, upon which is founded Modern Physiology and the theory of Modern Medicine. This picture I had framed with a glass on each side so the picture will be on one side and the reference on the reverse.

We hope to have the shop open and ready for inspection in a few weeks. We would like to have donated some lamps like the pioneer doctors used lamps that are or can be wired.

(Mrs. J. B.) VIRGIE LUKINS
Chairman

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REPORT OF ORGANIZATION COMMITTEE

Early in the year I divided the state into four districts. Each Vice-President wrote letters to County Medical Societies in her district where there were no organized Auxiliaries. There were only two answers favorable for organizing an Auxiliary. We are still trying to add to our number of Auxiliaries. We have succeeded in reorganizing one or two and increasing the membership in some. Letters recently have been sent to inactive Auxiliaries urging them to come to the State meeting to get information and enthusiasm enough to reorganize.

Respectfully submitted,
(Mrs. J. B.) VIRGIE LUKINS,
Chairman.

REPORT OF THE CORRESPONDING SECRETARY

During the month of October, 1937, the following reports were mailed to each Auxiliary President in the State:

1. Minutes and Reports of the Woman's Auxiliary to the American Medical Association held in Atlantic City in June, 1937.
2. The Report and Recommendations of the Program and Health Education Committee.
3. Suggestions of the National Committee on Public Relations.
4. The Aims for 1938, Kentucky Auxiliary.
5. The President's Message.

A total of 64 pieces of literature.

At Christmas time the President's Message was typed for the Quarterly.

In January notices of a Board Meeting to be held in Louisville, January 20 at the Brown Hotel, were sent to 23 members.

Two letters were written to the State Hygeia Chairman during the year.

The President's Report to the Southern Medical Association was typed and 18 personal letters regarding business of the Woman's Auxiliary to the Kentucky State Medical Association were written, making a total of 108 pieces of correspondence during the year.

I have also tried to put the membership file in order; but this is rather difficult as the fiscal year for the Auxiliaries start at such different times during the year.

Respectfully submitted,
(Mrs. Chas. H.) JANE MOORE

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ANNUAL REPORT OF THE TUBERCULOSIS COMMITTEE**September, 1937, to September, 1938**

The work of the tuberculosis committee has not made any spectacular strides during the past year. The chairman, realizing the many demands upon locals, has tried to be considerate in making requests of those in field service. We can, however, truthfully say that we have plodded along throughout the year, lending a hand, here and there, wherever openings were available.

A very important part of the year's work consisted in preparing the articles for the quarterly publication of the auxiliary. These have been given much thought, and we have reason to believe they have accomplished something for the cause of tuberculosis control.

In each article an effort was made to select phases of tuberculosis control that were of vital importance, and to bring them to the attention of the readers in such a way as to attract attention, create interest, impart information and stimulate action among the readers. The part of the page given to field reports has been neglected, because reports have not been received.

The Christmas Seal Sale in December of 1937 gave us a splendid opportunity for service. The educational programs put on at that time by the Kentucky Tuberculosis Association offered opportunities for service along many lines. Literature was distributed, material was carried to schools, speakers were

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furnished for local needs, and varied services of our groups helped the Kentucky Tuberculosis Association in a successful educational and fund raising campaign.

During the Early Diagnosis Campaign in April 1938, an effort was made to create interest among our locals, and thus assist the Kentucky Tuberculosis Association and local health departments in the promotion of this splendid program. Special literature was distributed and other valuable services were rendered.

All organizations in the State have been notified, through the presidents as well as the tuberculosis chairmen, of the meeting of the Southern Tuberculosis Conference which is to convene at the Brown Hotel September 19, 20 and 21. All locals have been urged to take advantage of this wonderful opportunity to acquire and spread more knowledge and create more interest in tuberculosis control in Kentucky.

During the year 71 letters have been written, literature has been distributed, and various other important services rendered.

While local chairman have failed to send in reports, there is evidence that work has been done and interest in our tuberculosis control program is increasing.

Your chairman respectfully submits this report, regretting its shortcomings, but grateful for its accomplishments, and asks that it be filed as a part of your records

(Mrs. L. E.) Beulah Grace Smith

What men want is not talent; it is purpose; in other words, not the power to achieve, but the will to labor.—Bulwer.

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ANNUAL REPORT OF THE EDITOR OF THE KENTUCKY MEDICAL JOURNAL— PART II.—WOMAN'S AUXILIARY SECTION

With the October issue off the press, our Quarterly, the Woman's Auxiliary Supplement to the Kentucky Medical Journal, has attained the age of seven full years.

Interest in our publication from outside Kentucky continues. Several State Auxiliaries have wistfully expressed the wish that it were possible for them to have their own supplement to the State Medical Journal. It was announced at the San Francisco Meeting of the American Medical Auxiliary that the Wisconsin Auxiliary would launch their publication this Autumn. Therefore, we Members of the Kentucky Auxiliary may rightfully continue our pride in the gallant gesture of the Kentucky State Medical Association in making our publication the pioneer venture in Auxiliary publication.

During the past year, the regular four issues have again been prepared, published and financed by the Auxiliary, a total of 124 pages.

Outstanding contributions are, perhaps;

The Medical Economics Series.

The Doctor's Day Observance Radio Program.

A Book Review, The Citadel, by Mrs. Eleanor Roosevelt.

The Jane Todd Crawford Library and Trail Planting Projects.

The Jane Todd Crawford Day Radio Drama.

There has been no dearth of material. We always seem to have more than enough reading matter. And—for that, there is cause for rejoicing. For, more of our Members are beginning to write for the Quarterly.

Look in the Index, October issue, and you will find that 28 Members, 4 Physicians and 3 guests have supplied us with reading material this last year. You will, also, find 3 poems and 9 pictures in our pages during 1938.

Your special attention is directed to a study of the Audit, published in the October issue. We sincerely hope that each Member will familiarize herself with the details of just how we manage to pay the cost of publishing the Quarterly. Each word, each punctuation mark, costs real money that has been raised, mostly, through the sale of advertising space in the Quarterly. And, you will please note that the Business Manager, Mrs. Wm. H. Emrich, keeps detailed account of every penny collected? We owe Mrs. Emrich a debt of gratitude for her accurate, painstaking work.

To each of you who has so thoughtfully and generously given your aid in helping to make the Quarterly more useful to the Auxiliary and to the medical profession by sending in your contributions for publication, I wish to express my gratitude. We are, it seems to me, learning to work better together. I have learned a great deal, as your Editor, largely under the instruction of that most ancient of teachers, Experience. I have enjoyed the Quarterly work, even though sometimes, I wondered where the payment for the next issue would come from! However, come, it always has! And—you will, I am sure, rejoice with the Business Manager and me in that. (Please read Report to Advisory Council, p. 460, Kentucky Medical Journal, November, 1938.)

To our President, Mrs. McCoy, and to each of the Officers and Chairmen of Committees who carry regular Messages or Pages in the Quarterly, I am grateful for the promptness with which they send their items to me. It takes time to edit and compile a publication and their consideration has facilitated my work as well as comforted my soul.

Yours respectfully,

(Mrs. A. T.) JANE TEARE McCORMACK,
Editor.

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ANNUAL REPORT OF THE BUSINESS MANAGER OF THE QUARTERLY

The Quarterly publication of the Woman's Auxiliary Section of the Kentucky Medical Journal was never more widely known than it is today. Requests have come from the four corners of these United States and Canada for Copies. Since September, 1937, I have mailed 965 copies to Auxiliary members. These are additional to those mailed four times a year to the 1800 physicians along with the Kentucky Medical Journal. The actual cost of printing and mailing this year is \$984.24, financed principally by advertisements.

Nine Auxiliary members procured forty-two advertisements. They are:—

Mrs. E. A. Barnes, Sampson Community Hospital—1 advertisement.

Mrs. G. A. Hendon, Jefferson County—9 advertisements.

Mrs. David Cohen, Jefferson County—2 advertisements.

Mrs. Wm. H. Emrich, Jefferson County—9 advertisements.

Mrs. A. T. McCormack, Jefferson County—14 advertisements.

Mrs. S. C. McCoy, Jefferson County—1 advertisement.

Mrs. S. J. Myers, Jefferson County—2 advertisements.

Miss Simone Thompson, Jefferson County—1 advertisement.

Miss Mayme Sullivan, Jefferson County—3 advertisements.

For seven years now, our Auxiliary women have given their services to the job of financing the Quarterly, and the job grows greater as the cost of labor and material increases. Three of these women, Mrs. A. T. McCormack, Mrs. Geo. A. Hendon and Mrs. David Cohen have been most faithful since the beginning.

A very great part of the financing fell on the shoulders of our Editor. The task at times was too great, so realizing that help was needed for the continued growth of our publication, we appealed to the physicians of the Kentucky State Medical Association for donations. Letters were mailed to 1685 physicians; forty-five of them responded. We are grateful for their help and encouraging letters.

Donations from physicians amounted to \$74.50.

There were other donations from County Auxiliaries and friends which we greatly appreciate; these amounted to \$53.71.

Total donations \$128.21

At this time we believe we have solved our financial problems with the aid of our advisory council. Mrs. Joseph Wier has accepted the appointment of Advertising Manager on a commission basis. Mrs. Wier has already proved a valuable asset to the Quarterly Staff, and with the continued cooperation of Auxiliary members she will succeed in putting the Quarterly on a secure financial basis. So I appeal to each of you to patronize our Advertisers. Take home some of the literature and circulars from their Exhibit in the foyer for your information and as a reminder.

Let us not be outdone in generosity; they have done their part well, let us do ours equally as well.

When in need of merchandise or service, refer to these circulars, then patronize our Advertisers.

The records of the Quarterly as kept by the Business Manager from September 1, 1937 to

October 1, 1938 have been audited by Mr. P. Willett Hagan, Certified Public Accountant. A detailed report of the Business Manager will be found in the October, 1938 Quarterly.

I shall briefly outline the receipts and expenses and bring this annual report up to date.

Total received from Advertisers from

Aug. 1, 1937 to Sept. 1, 1938.....\$ 957.74

Total donations 128.21

Total Receipts. 1937-1938.....\$1,085.95

Disbursements:—

Expense of Quarterly 972.61

Bank Service and Tax..... .38

Total Disbursements.....\$ 972.99

Total Balance agreeing with Bank

Balance as of Aug. 1, 1938, Liberty

Bank\$ 191.30

Expense for postage and express from

Sept. 1937 to Sept. 1938..... 21.74

Net Balance\$ 169.56

Subsequent Report:—Checks Received after books closed for audit, Aug. 1, 1938.

Medical Arts\$11.25

Brooks Denhard..... 20.00

Donation from Sampson

Community Hosp. Aux... 2.00

Oehrle Coal Co..... 6.50

Ky. Med. Journ. com.

on 1937 ads..... 13.59

Ky. Med. Journ. com.

on 1938 ads..... 17.95

Model Drug 11.25

Jefferson Co. Milk Com... 20.00

Total balance on hand, Oct. 5, 1938... \$272.10

Accounts of 1935-'37-'38 unpaid..... 92.75

Net worth\$364.85

Respectfully submitted,

(Mrs. Wm. H.) VIRGINIA E. EMRICH

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**THE REPORT OF THE CONVENTION OF
THE AUXILIARY TO THE AMERICAN
MEDICAL ASSOCIATION, WHICH WAS
HELD IN SAN FRANCISCO JUNE
13-16, 1938**

To report this convention as I should like to do, and to express to you just what it meant to me would, I'm sure, require more time than is allotted to me here.

To me, the entire trip (my first) over the plains, through snow capped mountains, across Great Salt Lake with its surrounding salt beds, on to the Coast; every feature of the Convention, every bit of entertainment; the trip down the Coast to Los Angeles; the tour through Hollywood, Beverly Hills, and Santa Monica; the day spent on the rim of the Grand Canyon and the return trip across the deserts and prairies of the Southwest, the oil lands and the rich farming lands of the Middlewest, were all very marvelous to me. I'm sorry you were not with me—all of you.

Since my time is limited I shall try to give you a few of the highlights of the meeting as I remember them.

On Monday, June 13th, a meeting of the National Board was held in the Fairmont Hotel, followed by a luncheon for the Executive Board Members. Not being a member of that Board I cannot report the proceedings of the meeting.

In the afternoon a choice of two sight-seeing trips could be made. The one I chose was over the San Francisco-Oakland Bay Bridge, through Oakland, and to the top of the hill overlooking the Golden Gate. Then we returned by way of Berkley to the University of California where tea was served at the International House, with the Alameda County Auxiliary as hostesses. It was very interesting to see young people (400 of them) from every nation taking advantage of the opportunity of receiving an education in an American Institution. They were making contact with young people from every other part of the world

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which was broadening their vision and outlook upon life. This institution is financed by funds given by John D. Rockefeller.

A trip through Chinatown, a Chinese dinner, and a visit to a Chinese Theatre was arranged for the evening but since there were some last minute details for the Southern Breakfast, which had not been taken care of, I did not go to Chinatown.

On Tuesday morning, at 7:45, our Southern Breakfast, honoring the President of the Auxiliary to the American Medical Association, Mrs. Augustus S. Kech, was served in the Terrace Room of the Fairmont Hotel. Mrs. John Humber who had charge of the decorations had put forth her best effort and the tables were beautiful. In spite of the fact that it was so early in the day the attendance was very good. We were very fortunate in having as speakers for the occasion Dr. Upham, President of the American Medical Association, followed by two of Kentucky's most illustrious physicians, each of whom had reached the top-rung of the ladder of achievement, in his own particular field of endeavor. These two great Kentuckians of course were Dr. Irvin Abell, President of the American Medical Association (at that time he was President-Elect), and Dr. A. T. McCormack, President of the American Public Health Association. It was a very great privilege to introduce them as Kentuckians. Then Mrs. Koch spoke briefly.

Just before Mrs. Kech's talk, Mrs. Shields, President of the Auxiliary to the Utah State Medical Society, asked for a little time in which to give us a little surprise. Her Auxiliary had decided to present each National Board Member with a token of appreciation. These tokens were candle snuffers made of Utah Copper by the students of Utah State University at Salt Lake City. The cards enclosed were engraved in gold and the packages were tied with silver ribbon representing the gold and silver of that State.

After recognition of a few Past Presidents of the Auxiliary to the American Medical As-

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sociation and to the Southern we were adjourned and went directly to the Gold Room to the general business session over which Mrs. Kech presided.

The house was called to order by Mrs. Kech who introduced Mrs. Geiger, the General Chairman for the Convention. Following the invocation by Rev. George H. B. Wright, Canon of Grace Cathedral, an address of welcome was given by Mrs. Clifford Wright, President of the Auxiliary to the California State Medical Society. The response was given by Mrs. Rollo K. Packard, of Chicago.

In Memoriam was given by Mrs. Swan of New York. Sixty-four members had passed away during the year leaving a membership of only 20,203 members.

In the absence of Mrs. T. R. W. Wilson, Recording Secretary, the roll call was in charge of Mrs. Herbert Mantz, of St. Louis.

After reports from the Convention Rules, Credential, Registration and Resolution Committees the President gave the report of her year's work, with Mrs. Fitzgerald in the chair. She reported having written 5,399 letters, travelled 50,000 miles, visited 34 states and the Southern and Northwestern Auxiliaries, organized 3 new states, given 13 radio talks, made 53 talks to lay groups, made 222 addresses and written 16 articles for publication. We thought she had had her hands full.

Reports were then heard from Chairmen of all standing Committees: each of which was interesting since it enumerated the work done along its particular line of endeavor. Then the President announced the Nominating and Elections Committees after which we adjourned for the day.

We went down to pier 3 at the foot of Jackson Street where we boarded a boat for an excursion on San Francisco Bay and down to Treasure Island where a buffet luncheon was served in the administration building of the Fair Grounds. On our return we saw Alcatraz in the distance. We were told that "Alcatraz" was an old Spanish word meaning "strange bird". Some of us replied that it was still inhabited by strange birds.

In the evening we were invited to the general session of American Medical Association where Dr. Abell gave his Presidential Address.

On Wednesday, the general session of the Auxiliary was held in the Gold Room with Mrs. Kech presiding. The minutes of the previous day were read and approved. Report of the Registration Committee read by Mrs. Hund. Resolutions read by Mrs. Hobart Rogers were adopted separately. Reports of State Presidents were accepted collectively. After the Nominating Committee reported, By-Laws concerning elections were read. Then the following officers were elected:

President—Mrs. C. C. Tomlinson, Omaha, Neb.

President-Elect—Mrs. Rollo K. Packard, Chicago, Illinois.

First Vice President—Mrs. Frank Haggard, San Antonio, Texas.

Second Vice President—Mrs. David Thomas, Lockhaven, Pennsylvania.

Third Vice President—Mrs. J. R. Westaby, Madison, South Dakota.

Recording Secretary—Mrs. James Downing, Des Moines, Iowa.

Treasurer—Mrs. E. E. Fisher, Portland, Ore.

Corresponding Secretary (Appointed later) Mrs. James M. Woodward, 2132 South 24th St., Lincoln, Nebraska.

These officers were installed by Mrs. James F. Percy, of Los Angeles, with appropriate ceremony.

Courtesy resolutions were read and adopted followed by reading and adoption of minutes after which we adjourned.

At 1:00 P. M. we had a luncheon in the Terrace Room at which time several speakers made brief addresses, chief of whom was Dr. Abell. Then amid weird strains of Hawaiian music, a number of girls entered the room carrying leis and marched to the speakers' table. Mrs. Henry Garland took charge and explained that she had borrowed, for the day, the old Hawaiian custom of presenting leis to those who had rendered outstanding service. So she placed leis around the necks of all the Past Presidents who were present.

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At 2:30 P. M. Dr. W. W. Bauer gave us a very interesting talk on Health Education.

For the evening, Open House was arranged for the Auxiliary members, at the San Francisco County Medical Society's Building, former home of a millionaire sugar king from Hawaii. Harp and orchestra music, a style show, and refreshments were enjoyed.

There being no meetings for Thursday morning which I was supposed to attend, I spent the morning looking over the various exhibits, including works of Art by doctors which were displayed in a wing of the Art Museum. You would be surprised to see how artistic some of our doctors are along other lines than the practice of medicine.

Thursday afternoon we went on a tour across the Golden Gate Bridge in Marin County, up Tamalpais to Muir Woods, one of California's famous Redwood Groves. In the midst of

this grove of giant Monarchs of the forest one is made to feel a deep reverence for the maker of them and of us.

At 7:00 P. M. a Bring Your Husband Dinner was served in the Red and Gold Rooms of the Fairmont Hotel. All music and entertainment was furnished by doctors. This was followed by the President's reception and ball at the Palace Hotel.

Thus ended the Sixteenth Annual Meeting of the Auxiliary to the American Medical Association in San Francisco.

Respectfully Submitted,

(Mrs. Luther) LINNIE BACH

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Every child should be successfully vaccinated against smallpox, the sooner the better, preferably two weeks after delivery, after the cord has fallen off. Every child should be actively immunized against diphtheria if the Schick test is positive after the first year. In certain localities, all children should be immunized against typhoid fever. All exposed or suspected children should have tuberculin tests at any age. Persons exposed to rabies should be given the anti-rabic treatment. All individuals with positive Dick test should be immunized against scarlet fever after eighteen months of age. Children should be protected against whooping cough and those exposed to measles should be given immune globulin.

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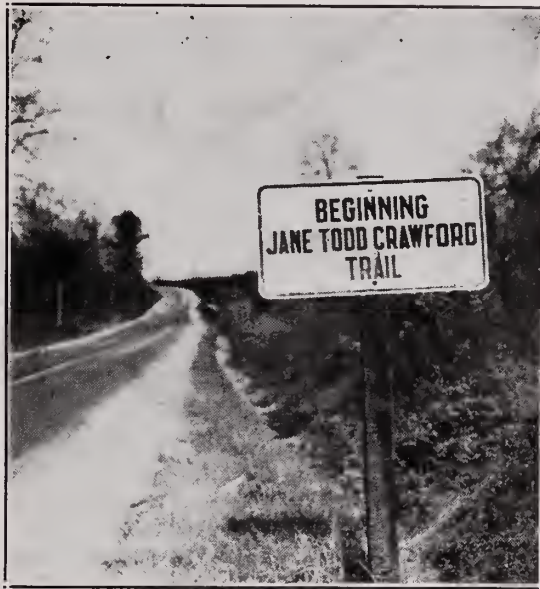


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KENTUCKY MEDICAL JOURNAL—PART II

WOMAN'S AUXILIARY SECTION

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MIDWAY BETWEEN COLUMBIA AND GREENSBURG

This road sign, below the old brick house now standing on the farm where the log cabin home of Jane Todd Crawford was located in Green County, marks the beginning of the 60 mile journey Mrs. Crawford traveled in great pain on horse back, December, 1809, to the home of Dr. Ephraim McDowell in Danville.

The Jane Todd Crawford Trail is well marked through Greensburg, Campbellsville, Lebanon, Perryville, to Dr. McDowell's home in Danville, the end of her Trail of Tribulation; for there, she was relieved by Dr. McDowell through The Great Experiment, The First Ovariotomy--foundation of modern, safe, abdominal surgery.

JULY, 1939

House On Site Of Crawford Home Over 100 Years Old



Courtesy of Louisville Courier-Journal

This quaint brick house in Green County more than 100 years old midway between Greensburg and Columbia, the property of Mr. Duff Thompson, rests near the site of the log cabin home of Mrs. Jane Todd Crawford where Dr. Ephraim McDowell first saw his now celebrated patient when he visited her that cold December 13, 1809, in response to the call from two other physicians for consultation on that painful, perplexing ailment never before diagnosed nor relieved—an ovarian tumor.

ANOTHER DREAM COMES TRUE

Another dream of the Kentucky State Medical Association came true on Saturday afternoon, May 20, 1939, when the dedication of the restored old home of Dr. Ephraim McDowell in Danville became an accomplished fact and the doors were thrown open to the public so the public may see the home where the epoch-making experiment—the First Ovariectomy—was performed by Dr. McDowell upon the noblest of patients, Mrs. Jane Todd Crawford. The house will be open daily for inspection at a nominal charge, under the care of Mrs. Lettie S. McDowell, widow of Charles R. McDowell, formerly a lawyer in Danville and a relative of Dr. McDowell, acting as hostess.

Furnishing the home with suitable furniture and equipment is the next step toward completing this medical shrine which promises to be the delight of all who may have

the good fortune to visit it, just a few steps from McDowell Park where stands the noble monument to Dr. McDowell, erected in 1879, and the modest stone nearby, memorializing Mrs. Jane Todd Crawford, Pioneer Heroine of Surgery, whose bravery made possible the fame of Dr. McDowell's skill in alleviating human suffering.

Both monuments were erected by the Kentucky State Medical Association.

A complete account of the dedication ceremony will appear in an early issue of the Kentucky Medical Journal.



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KENTUCKY MEDICAL JOURNAL—PART II

WOMAN'S AUXILIARY SECTION

Published Quarterly Under the Supervision of the Advisory Council

Vol. VIII, No. 3

Bowling Green, Kentucky

July, 1939

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PRESIDENT'S MESSAGE

Mrs. Harlan Vernon Usher, Sedalia

When this Message reaches you, there will be left only two more months of our Auxiliary year! Let me urge that we do not lag in our activities but make the last period of our work the best and most effective.

Now we are looking forward to our Annual State Meeting, to be held this year in Bowling Green, September 11-14, on the Campus of Western State Teachers College. Auxiliary Headquarters will be in West Hall, where Auxiliary Members, alone in attendance, or, with their husbands, may enjoy regular dormitory life at the nominal charge of \$1.00 per night for lodging. Linens are furnished but blankets, if wanted, should be brought. Meals at small cost will be provided at the College Cafeteria.

Reservations should be made early through Miss Florence Snyder, Western State Teachers College. Mrs. G. M. Wells, President of Warren County Medical Auxiliary, is Local Chairman for Auxiliary Arrangements. Mrs. R. T. Layman, Elizabethtown, is Program Chairman.

May I remind all State Officers, Chairmen, and County Presidents that I need your annual Reports by August First? Supplementary reports may be sent to me later. But, in order that I may write my report for the House of Delegates, as well as for the Auxiliary in Business Session, I need to know what you have been doing throughout the year. My report is really your report—a composite of all the work done in the Auxiliary during the past year. It is necessary for me to know about your work before I can give you the recognition you so justly deserve. So—please send your reports to me by August First.

And while discussing reports, may I remind you, again, that the Achievement Contest for this year, closes with the opening of the Annual Meeting? Mrs. S. C. McCoy, Preston Street Road, Louisville, Chairman, is keeping the record of your Auxiliary Achievements as you report them to her. Will your County win the Blue Ribbon? Be sure that Mrs. McCoy gets a report of all your achievements for every point counts, you know!

Some of us enjoyed the happy privilege of attending the Annual Meeting of the American Medical Auxiliary in St. Louis, May 15-19. Meeting this fine group of women from all over

(Please Turn To Page 81)

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-:- EDITORIALS -:-

MRS. ROOSEVELT ENTERTAINS

The wives of the State Health Officers were invited to have Tea with Mrs. Franklin D. Roosevelt at the White House on Tuesday, April 25th, during the Annual Conference of the Surgeon General of the United States Public Health Service, Dr. Thomas Parran. Assembled at the East Entrance, the forty, and more, guests were ushered through the beautiful East Room to the portico and stood near the President, Mrs. Roosevelt and American Red Cross Officials while the President, introduced by the Hon. Norman H. Davis, National Chairman, greeted several hundred Red Cross workers, standing on the lawn below, and delivered his annual message to them, the high light of the ARC Annual Conference.

Following the President's speech, Mrs. Roosevelt, assisted by Mrs. Henry Morgenthau, Jr., wife of the Secretary of the Treasury, received the doctors' wives in the Blue Room. Tea was served in the adjoining Red Room where Mrs. Roosevelt, Mrs. Morgenthau and Mrs. Thomas Parran, passing sandwiches and cakes, chatted quite informally as they mingled with the guests.

Representing Kentucky, Mrs. A. T. McCormack, accompanied Mrs. Felix J. Underwood, representing Mississippi and Mrs. George Cox, representing Texas.

ANNUAL MEETING

The Annual Meeting of the Woman's Auxiliary will be held in conjunction with the Annual Meeting of the Kentucky State Medical Association at Western State Teachers College, Bowling Green, September 11-14, with headquarters at West Hall. Mrs. R. T. Layman, Elizabethtown, is Chairman of the Program, for the Auxiliary.

Preparations in Bowling Green are under the General Chairmanship of Dr. E. W. Stone, with Dr. John H. Blackburn as Chairman of Arrangements and Mrs. G. M. Wells, President of the Woman's Auxiliary to the Warren County Medical Society, Local Chairman for Auxiliary Arrangements.

Reservations should be made early—now is a good time—through Miss Florence Snyder, Western State Teachers College. A charge of \$1.00 per night, linens furnished, with meals available at small cost at the College Cafeteria, promise an inexpensive session at this delightful meeting place recalled with fond memories by all who attended the Meeting here in 1930. Blankets will not be furnished. Bring yours, if you wish a blanket at night. You may not need a blanket but if you bring one you will be sure of warmth. And—occasionally, cool nights greet us in September.

WHITE HOUSE CONFERENCE

The first White House Conference, called by President Theodore Roosevelt in 1909 to study conditions relative to the dependent child, resulted in 15 definite recommendations and furnished stimulus for the organization of the Children's Bureau, placed under the Department of Labor in 1912.

The second White House Conference, called by President Woodrow Wilson in 1919, was enlarged to include, under 5 sections: economic and social basis for child welfare standards; child labor; health of children and mothers; children in need of special care; standardization of child welfare work. Eight important regional conferences followed.

The third White House Conference, called by President Herbert Hoover, met in November, 1930, expanded to consideration of all children under all circumstances. After, 16 months devoted to preparatory study, research and the assembling of facts by 1200 experts in the various fields of child life, the findings, embodying main recommendations, were summed up in The Children's Charter, now familiar to all child-life workers.

The fourth White House Conference, known as the Conference on Children in a Democracy, called by President Franklin D. Roosevelt for its initial meeting April 26 1939, met in the East Room, at 10:00 A. M., for the opening address by the President and Mrs. Roosevelt, followed by others. Miss Frances Perkins, Secretary of the Department of Labor, presided at this and the afternoon session, held in the Auditorium of the Labor Building. Madam Perkins presided, also, at the banquet held that evening at the Shoreham Hotel. Representatives from all the States and Territories were present and all seemed enthused with the plans presented for study and research in preparation for the big Conference scheduled for November 1940, when results will be pooled and further developments determined for improved conditions for Children in a Democracy.

Present from Kentucky were: Dr. Annie Veech, Mrs. Mary Breckinridge, Dr. Hugh Leavell, Dr. and Mrs. A. T. McCormack.

CORRECTION

An error was made in the April issue. The title of the first article on page 55—National Organization Chairman Writes—is wrong. This form letter, sent to the wives of West Virginia physicians, was signed by the West Virginia Chairman of Organization who was, also, National Program Chairman.

The mistake was made by the Editor, then in Florida, without access to her records. The letter, of such excellence and general applica-

tion, was adapted to the needs of Kentucky and published with the earnest hope that it would answer a few of the many questions regarding Auxiliary membership common to all States. The Editor regrets that the item caused some confusion and cheerfully begs to be allowed to assume whatever blame there is for the mistake.

SYMPATHY

Sympathy—a mutual feeling of pleasure, or pain or compassion—is beautiful and often brings such rare comfort, to those who need some one to share an experience with them. Flowers, in the mute, charming manner that is theirs, alone, offer the one universally accepted way of expressing sympathy. Yet, have you not, at times, pondered at the bewildering profusion of beautiful flowers sent all the same time, only to perish all at the same time, leaving fragments of rubbish to be cleared away? And, have you not wondered if there could be some other way to express sympathy that would be as acceptable as flowers?

This problem has been given consideration by many people. One group, the Sisterhood of the Synagogues, in some cities has solved the problem in this manner which commends itself to thoughtful persons:

Instead of sending flowers to the bereaved, a contribution, for the same amount as would otherwise have been spent for flowers, is sent to the Memorial Floral Fund of the Sisterhood for use in philanthropic work. Then, the Chairman of this Floral Fund mails a card to the bereaved announcing that a contribution has been made in memory of whoever the loved one may have been, giving the name of the Donor "Who extends deepest sympathy". Flowers of Sympathy, in truth!

PRESIDENT'S MESSAGE

(Continued From Page 79)

the country and listening to the splendid reports of their work was inspiring—giving broader vision of Auxiliary possibilities and greater determination to carry out our Achievement Program. I was proud to present a report of your work at this National Meeting and I want to thank every Member for her share in making it possible to list Kentucky with the active State Auxiliary organizations.

You will be glad to know that the National President, Mrs. Rollo K. Packard, Chicago, has accepted an invitation to attend our State Meeting. We hope Mrs. W. K. West, Oklahoma City, President of the Southern Medical Auxiliary, will also find it possible to attend.

PRELIMINARY PROGRAM of the SEVENTEENTH ANNUAL MEETING of the WOMAN'S AUXILIARY to the KENTUCKY STATE MEDICAL ASSOCIATION

Bowling Green, Kentucky
September 11-14, 1939

Monday, September 11, 1939

9:00 A. M.-4:00 P. M.

Registration Daily

(Every woman is requested to register immediately upon her arrival).

2:00 P. M.

Study Class

3:45 P. M.

Pre-Convention Board Meeting

Mrs. H. V. Usher, Sedalia, Presiding
(All County Presidents, State Officers and Chairmen are urged to be present. All members are invited).

8:00 P. M.

President's Report to House of Delegates

Mrs. H. V. Usher

Tuesday, September 12, 1939

9:00 A. M.

Joint Meeting with the Kentucky State Medical Association

Installation of President of the Kentucky State Medical Association

General Meeting, Opening Session

9:30 A. M.

Presiding Officer

Mrs. H. V. Usher

America

Invocation

Address of Welcome

Response; Mrs. George Bradley, Elizabethtown
Messages from Kentucky State Medical Association:

Wm. E. Gardner, M. D., Louisville,
Retiring President

John W. Scott, M. D., Lexington,
Incoming President

Advisory Council:

Virgil Kinnaird, M. D., Lancaster

Arthur T. McCormack M. D., Louisville

Van A. Stilley, M. D., Benton

Report of Committees:

Arrangements, Mrs. George M. Wells,
Bowling Green

Credentials,

Roll Call

Minutes of the Sixteenth Annual Meeting.

Report of the President....Mrs. H. V. Usher

Reports from Counties

Announcements

In Memoriam

Recess

12:30 P. M.

Subscription Luncheon

Address....A. D. Willmoth, M. D. Louisville
Tea

8:00 P. M.

Public Meeting Kentucky State Medical
Association

9:30 P. M.

Reception—President, Kentucky State Medical
Association

Wednesday, September 13, 1939

9:00 A. M.

General Meeting—Second Session

Presiding Officer.....Mrs. H. V. Usher
Reports:

Officers

Chairmen of Committees

Delegate:

Woman's Auxiliary to the American Med-
ical Association, Mr. Jos. E. Wier, Lou-
isville.

Councilor:

Woman's Auxiliary to the Southern
Medical Association, Mrs. John M. Blades,
Butler

Unfinished Business

New Business:

Report of Committee on Resolutions

Report of Committee on Credentials

Report of Nominating Committee

Election of Officers

Installation of the President

Address of the President:

Mrs. R. T. Layman, Elizabethtown
Adjournment

12:30 P. M.

Annual Luncheon, Subscription

Toastmistress Mrs. H. V. Usher
Honoring our National and Southern
Presidents

Mrs. Rollo K. Packard, Chicago, Illinois
Special Guests Representing Kentucky State
Medical Association

Wm. E. Gardner, M. D., Louisville

John W. Scott, M. D., Lexington

Advisory Council:

Virgil Kinnaird, M. D., Lancaster

Arthur T. McCormack, M. D., Louisville

Van A. Stille, M. D., Benton

2:30 P. M.

Post-Convention Board Meeting

Mrs. R. T. Layman, Presiding

(All County Presidents, State Officers and
Chairmen are urged to be present. All mem-
bers are invited. Plans for the coming year
will be considered. Your suggestions are
earnestly requested).
Golf

SUGGESTED CONSTITUTION AND BY- LAWS FOR COUNTY OR DISTRICT

AUXILIARIES**Constitution****Article I—Name**

The name of this Organization shall be the
Woman's Auxiliary to the*
(Name of County or District)

Medical Society

Article 2—Object

The object of this Auxiliary shall be to ex-
tend the aims of the medical profession
through the wives, daughters, mothers, sisters,
and widows of the physicians, to other organ-
izations which look to advancement in health
and education; to assist in the entertainment
at County, State and District meetings; to pro-
mote acquaintanceship among the families of
doctors, that local unity and harmony may be
increased.

Article 3—Membership

The membership of the Woman's Auxiliary
to the
(Name of County or District)

Medical Society shall be composed of the wives,
daughters, mothers, sisters and widows of the
..... Medical
(Name of County or District)

Society or other component Societies of the
American Medical Association now residents of
this
(Name of County or District)

a. Active members shall consider themselves
in honor bound, as far as possible, to study the
subjects under consideration by the Auxiliary,
and to perform committee or official work as-
signed to them.

b. Associate members shall be entitled to all
privileges of the Auxiliary, except those of
voting and holding office upon payment of
dues. Any woman interested in medical and
health work may be elected an Associate Mem-
ber.

c. Honorary membership may be conferred
upon such persons as the Executive Board may
recommend. Honorary members have no du-
ties, but are entitled to all privileges of the

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organization, except the right to vote and hold office, without payment of dues.

Article 4—Officers

The officers of this Auxiliary shall be a President, a Secretary and a Treasurer. (A Parliamentarian, an Historian, a Corresponding Secretary and four Vice-Presidents may be added if necessary.) The President shall be empowered to appoint such Officers and chairman of Committees as may become necessary to promote the welfare of the Auxiliary during the year. The Historian and the Corresponding Secretary are usually appointed by the President.

Article 5—Executive Board

These Officers together with the Chairmen of the Standing Committees shall constitute the Executive Board.

Quorum

A majority of those present shall constitute a quorum.

Article 6—Standing Committees

There shall be.....Standing Committees corresponding, as nearly as possible with the standing committees of the State Auxiliary. The State Committees include Cancer, Doctor's Shop, Finance, Hygeia, Jane Todd Crawford Memorial, Legislation, Organization, Press, Publicity, Program, Public Relations, The Quarterly, Radio and Tuberculosis.

Article 7—Elections

(a) All Officers shall be elected by ballot.

(b) The term of office of all Officers shall begin at the close of the regular..... meeting. The Secretary and Treasurer may serve two years; all other officers one year.

(c) A nominating committee composed of three members shall be appointed by the President to present a list of officers for the ensuing year, at the meeting, when the Annual Election is held.

Article 8—Meetings

(a) Regular meetings shall be held on theof each month from..... to

(b) At the regular meeting in, the Officers for the ensuing year shall be elected and their installation shall be held at the close of the regular.....meeting.

(c) At the regular meeting, designated as the "Annual Meeting," reports of all Officers and Chairmen of Committees shall be made.

(d) Special meetings may be called by the President, or by five members, having first requested the President to call such a meeting.

Article 9—Dues

Each member shall pay to the County Auxiliary annual dues of One Dollar (\$1.00)—Fifty Cents (50c) of which is to be retained in the County Treasurer and Fifty Cents (50c) sent to the Treasurer of the State Auxiliary. The State Treasurer will pay Twenty-Five Cents (25c) per capita to the Treasurer of the Woman's Auxiliary to the American Medical Association, Annual dues are due and payable 1st. The fiscal year extends from1st to.....30th.

Article 10—Amendments

This Constitution and By-Laws may be amended at any regular meeting of the Auxiliary by a two-thirds (2-3) vote of the members present, provided the amendment has been submitted in writing at a previous regular meeting.

Article 11—Parliamentary Authority

The rules contained in Cromwell's Compendium of Parliamentary Law or, Robert's Rules of Order, if preferred, shall govern this organization in all cases to which they are applicable and in which they are not inconsistent with this Constitution and By-Laws.

BY-LAWS

Article 1—Duties of Officers

The duties of the President, Secretary, Treasurer and other Officers shall be those which usually devolve upon such Officers.

Article 2—Meetings

All meetings of the Auxiliary and of the Executive Board shall be conducted according to the regular order of business and parliamentary law which usually governs such meetings.

Article 3—Quorum

A majority of those present shall constitute a quorum.

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CHILD HEALTH AND WELFARE

Mrs. Joseph E. Wier, Louisville, State Chairman, Public Relations

OUR QUESTION BOX

Question—Can a parent “love” a child too much?

Answer—The answer to this question involves the wisdom of the parent.

The unwise parent that seeks to save the child every difficulty, makes his decisions for him, and absorbs his developing personality, may blight his happiness forever. Such a parent is like a trellis or stake in the garden, which the child flower leans and grows upon until he has no individuality of his own.

The wise parent knows that the psychological chord that binds parent and child together must be severed gradually. He or she acts as a gardener to the child flowers in his garden. He cultivates them, prunes them, and protects them, constantly realizing that the mature flower must bloom and grow alone.

The intelligent parent knows that a child's love must progress through the years—from the baby dependence on mother, to the affectionate response to father—a little later to friends,—then to a chum of the same sex, and last to a sweetheart and marriage to complete the cycle.

Mrs. A. B. Sawyer, Jr.,
Director Country Nursery School,
Louisville.

Question—Do you think Doctors are over-cautious about pains in the abdomen? (Old fashioned bellyache)

Answer—No! Appendicitis is much more treacherous in children than adults and is apt to rupture earlier. The symptoms are harder to evaluate. I do not think Doctors can be over-cautious about pains in the abdomen. Never give a laxative without having a doctor examine the child first. Obstruction of the bowels and appendicitis both are made worse by laxatives. They are almost necessarily fatal when laxatives are administered.

James W. Bruce, M. D.
Louisville

Question—I understand that psychiatrists consider a feeling of security one of the most important emotions for a child, what is the best way to achieve this?

Answer—I think a feeling of security is most necessary to emotional stability in your child; when he feels insecure, confusion and worry grow, and this is not conducive to a healthy emotional development. The best way to develop this feeling of security is for the parents to be consistent. Be consistent in your

discipline, in your promises, and in the small as well as large things. By consistency, I mean if you decide a child should not have candy between meals, then never let him have candy between meals. Explain why you make the rule. Nothing is too inconsequential to explain to a child.

If you break a rule, now and then, the child soon develops temper tantrums, or other bad habits to try to get his own way. On the other hand, if you tell a child he can do, or have a thing, the parent should make whatever sacrifice necessary to do as he promised. Be consistent in your parental attitude.

W. K. Keller, M. D.
Assistant Professor of Psychiatry,
University of Louisville

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DOCTOR THOMAS WALKER

A RADIO ROUND TABLE

By Mrs. Samuel H. Flowers, State Radio Chairman

Presented On Doctors Day, April 13, 1939, At 2:45 P. M.

Radio Station WAVE, Louisville

Announcer:

Good afternoon everyone. Today is Doctors Day in the State of Kentucky and Doctor Thomas Walker, the first physician, and perhaps the first white man to enter this State, is being honored on the anniversary of the date he arrived, April 13, 1748, by the Woman's Auxiliary to the Kentucky State Medical Association. Join us while we turn the pages of history to bring you the story of this man, the first white man to brave the dangers that then existed, to trade with the Indians and erect a log cabin home in what is now known as Kentucky. Seated here in the studio is Mrs. P. E. Blackerby, Mrs. George A. Hendon, Mrs. J. B. Lukins, Mrs. Stephen C. McCoy, Mrs. Joseph E. Wier, Mrs. L. E. Smith and Miss Grace Stroud, State officers of the Woman's Auxiliary to the Kentucky Medical Association. We are going to review the story of Doctor Walker for you. And now Mrs. Blackerby—How does our story begin?

Mrs. Blackerby:

Our story begins with the birth of Thomas Walker, on January 25, 1715 near the village of Walkertown on the Mattaponi River in King and Queen County, Virginia. He was tutored by Doctor George Gilmer and had the benefit of instruction at William and Mary College. He adopted the profession of medicine and surgery and for some years practiced that profession at Fredricksburg and surrounding localities.

He attained eminence in the profession of medicine and was himself the instructor of others.

Announcer:

Mrs. Hendon, will you continue the story please?

Mrs. Hendon:

At that day much territory of Virginia, east of the Blue Ridge Mountains, was sparsely settled and Doctor Walker, early in his life wanted to explore—to find out just what lay beyond that ridge of mountains. He had, like many other men of his day, learned the art of surveying in response to the demand for sur-

veyors in the work of exploration and settlement. Shortly after his marriage in 1741, he moved to the eastern foot of the Blue Ridge, where he settled in what is now known as the county of Albemarle. He called his home "Castle Hill."

Announcer:

What happened next, Mrs. Lukins?

Mrs. Lukins:

In 1748, Doctor Walker in company with Colonel James Patton and others made an expedition across New River. Then in 1750, beginning on March 6, he crossed the mountains through the eastern part of Kentucky. It is said that the path that brought him to this State was untrodden by the feet of any white man, except possibly a few French Traders, who if they visited that region at all left no trace of their visit. Doctor Walker's Journal therefore is the first record of evidence of any effort made by the English speaking people to penetrate that unknown land and tell the world of its mysteries.

Announcer:

Was his first effort to settle Kentucky successful, Mrs. Wier?

Mrs. Wier:

No, his first effort to settle Kentucky failed. Troubles began upon the border with the French and the English colonies and Indians, which, in 1754, culminated in the outbreak of the French and Indian War. During this war which lasted seven years, the extension of border settlement was completely stopped. During this war, Doctor Walker served as Commissary General of the Virginia Troops with the rank of Major.

Announcer:

Just what did Doctor Walker look like, Mrs. Smith?

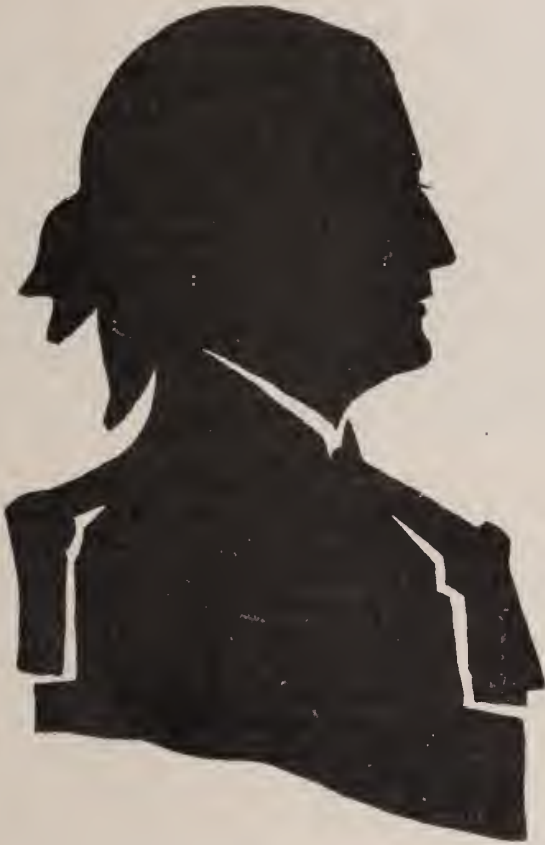
Mrs. Smith:

It is said that he was only five foot, seven inches tall, had keen, alert, blue eyes which were ever ready to twinkle with merriment. He was physically strong and the story of his travels through the wilderness in the course of his long life necessarily indicate an unusual

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FIRST
EXPLORER
OF
KENTUCKY
(1750)

—
FIRST WHITE
MAN TO
BUILD HOUSE
IN
KENTUCKY

DR. THOMAS WALKER
(1715-1794)

Frontispiece of "History of Kentucky" by Temple Bodley—Courtesy of the Filson Club
(See former issues of this publication for earlier articles on Dr. Walker—July, 1934, p. 68,
and October, 1934, pp. 100, 122.)

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degree of physical hardihood, as well as physical courage. This little story of his strength has always been interesting to me. He was supervising the construction of a road through a gorge in the hills near his home "Castle Hill," in Virginia. A large stone lay in the way. Two men had tried in vain to move it. Doctor Walker dismounted and alone, moved the stone to one side. For many years it remained at that spot and was known as "Walker's Rock."

Announcer:

Tell us more about him, Mrs. Lukins.

Mrs. Lukins:

He had a cheeful disposition and was fond of children. It is said that his humor became proverbial and in the midst of privation and danger his bouyant mind and encouraging words lightened the cares and anxieties of those with whom he was associated. He was a very religious man and in his Journal of 1750 we find that he never traveled on Sunday.

Announcer:

And now we are back to Mrs. Blackerby again. What have you to tell us now about Doctor Walker?

Mrs. Blackerby:

I would like to read some of Doctor Walker's Journal—the first diary to be kept by a white man in Kentucky. This diary of Doctor Walker's can be read today at the Filson Club in Louisville. Following are excerpts from Doctor Walker's Journal:

"Having on the 12th of December last, having been employed for a certain consideration to go to the westward in order to discover a proper place for settlement, I left my house on the sixth of March, at 10 o'clock, 1750, in company with Ambrose Powell, William Tomlinson, Colby Chew, Henry Lawless and John Hughls. Each man had a horse and we had two horses to carry baggage.

Announcer:

Mrs. Hendon, will you read some of his diary for us?

Mrs. Hendon:

Yes, Doctor Walker related each day's experience from March 6th to 9th, which brings his party to Clinch River not far from Cumberland Gap—He wrote: "traveled to a river, which I suppose to be that which the hunters call Clinch River. We marked several beeches on the east side. We could not find a ford shallow enough to carry our baggage over on our horses. Ambrose Powell forded over on one horse and we drove the others after him. We then made a raft and carried over the baggage."

Announcer:

And then what happened, Mrs. McCoy?

Mrs. McCoy:

On April 11th he wrote: "Having travelled 5 miles to and over a high mountain, we came to Turkey Creek, which we kept down four miles. It lies between two ridges of mountains, that to the Eastward being the highest.

Announcer:

What was recorded on April 12th, Mrs. Wier?

Mrs. Wier:

April 12, Doctor Walker wrote: "We kept down the creek two miles further, there it meets with a large branch coming from the southwest, and, thence runs through the East Ridge making a very good pass," and "a large Buffalo Road goes from that Fork of the Creek over the West Ridge which we took and found the Ascent and Descent tollerably esie." Then on April 13th he wrote: "We went four miles to a large Creek and from these six miles to Cave Gap, the Land being levil."

Announcer:

Will you tell us about Cave Gap, Mrs. Smith?

Mrs. Smith:

Cave Gap, he later called Cumberland Gap. He named it after William Augustus, the Duke of Cumberland, son of George II and Queen Caroline.

Announcer:

Miss Stroud, to what section of the State does this diary of Doctor Walker's refer?

Miss Stroud:

Doctor Walker refers to the beautiful mountains rising above Cumberland Gap in Tennessee and Middlesboro in Kentucky. There is one spot in this section upon which you can stand and have your feet in three states, Tennessee, Virginia and Kentucky. It is here that he saw majestic Pinnacle Moun-

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CABIN OF DR. THOMAS WALKER

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WHITE MAN IN
KENTUCKY

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original site, now
The Dr. Thomas
Walker State Park
near Barbourville.

tain and admired the pretty green valley that and to you, Mrs. Blackerby.

Announcer:

And now back to Doctor Walker's Diary—and to you, Mrs. Blackerby.

Mrs. Blackerby:

On April 22nd it is interesting to note that Doctor Walker says: "One of the horses was unable to proceed, having been bitten by a bear. Only three of our party was able to continue on ahead so Ambrose Powell, Colby Chew and I departed—leaving the others to provide and salt some bear, build an house, and plant some peach stones and corn."

Announcer:

Where is the site of that first house, Mrs. McCoy?

Mrs. McCoy:

The first house ever built in Kentucky was built near the present town of Barbourville.

Announcer:

Kentucky must have been indeed a wild and beautiful wilderness back in those days when it was filled with Indians, buffaloes, deer and

wild turkey. Did Doctor Walker ever say anything about hunting during this historical trip, Mrs. Wier?

Mrs. Wier:

Yes, in his diary on July 13th he wrote: "We killed on the journey, 13 buffaloes, 8 elk, 53 bears, 20 deer, 4 wild geese, and about 150 turkey, besides small game. We might have killed three times as much meat, if we had wanted it."

Announcer:

Well I'd call that taking advantage of a hunter's paradise. . . . But back to the head of our class, Mrs. Blackerby! Since Kentucky mountains are rich with coal, I was just wondering if Doctor Walker took notice of it on this first trip.

Mrs. Blackerby:

Yes, he recorded in his diary on April 13th, 1870 that they found coal, much of it.

Announcer:

Then we can well imagine that their first night in Kentucky was lighted and warmed by a good fire made of new, black coal; one of Kentucky's own natural resources—I wonder if he saw the blue grass on that trip, Miss Stroud?

Miss Stroud:

No, history tells that he missed the beautiful blue grass country! And, it was twenty

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years after this first visit made by Doctor Walker, that the actual settlement of the new country through Cumberland Gap got under way.

Announcer:

And now we leave behind us the story of Doctor Thomas A. Walker, to whom we pay special tribute today and ask Mrs. George A. Hendon to tell us why Doctors Day is observed in our State.

Mrs. Hendon:

The Woman's Auxiliary to the Kentucky State Medical Association adopted a resolution in 1935 to follow the example set by the Georgia State Auxiliary in 1934 designating one day in every year as Doctors Day. All Southern States have since adopted the custom. The object of Doctors Day is to honor the medical profession, present and past; to study and commemorate its promotion of human health and happiness through the ages; and, through its observance, to express our appreciation, respect and love for all Members of the Medical Profession.

Announcer:

And NOW TO ALL OF THE MEMBERS of the Medical Profession, we here, pay our grateful tribute, as they go about, daily doing good. "The skill of the physician shall lift up

his head and in the sight of great men he shall be in great Admiration."

Music:

Announcer:

You have been listening to the dedicatory program honoring all physicians, with special tribute being paid this Doctors Day, of 1939, to Doctor Thomas Walker, the First Physician to come to the State of Kentucky.

The program was presented by the Woman's Auxiliary to the Kentucky State Medical Association and was written by Mrs. S. H. Flowers, State Radio Chairman of that organization. The material for this program was obtained from the W. P. A. Medical Historical Research Library at the State Board of Health.

Your Announcer is Burt Blackwell.

And this is WAVE in Louisville.

FILMS AVAILABLE FOR YOUR USE

Do you want a Movie for your next Health Program?

Do you want a sound film or a silent film?

If so, write Dr. L. E. Smith, Executive Secretary, Kentucky Tuberculosis Association, 620 South Third Street, Louisville, and ask for one of the following 16mm films: (For films on Tuberculosis, select one from listing on page 46, April issue.)

WHAT PRICE HEALTH?—good on subject of sanitation.

PREVENTING THE SPREAD OF INFECTIOUS DISEASES—shows how diseases are spread and how we can prevent them.

CARRIERS OF DISEASE—deals with mosquitoes and flies, etc.

THE HOUSE FLY—(2 films) deals with its danger, etc.

ARMIES OF HEALTH AND DISEASE—deals with the study of germs and can be understood by any group from the 6th grade up.

FOOD AND GROWTH—deals with the value of proper diet as shown by experimentation with white rats.

POSTURE—an excellent film.

THE BODY AND FRAME-WORK—explains the human body.

SKIN—title explains.

DIGESTION—title explains.

TUBERCULOSIS films listed in April Quarterly—all interesting and instructive.

All these films may be borrowed, without charge, by responsible persons who have a good machine and an operator who will use them and see that they are returned without damage, other than the necessary wear of the film. The Kentucky Tuberculosis Association will pay the transportation to the applicant who is expected to pay the return transportation, always insured.

THE WIFE OF HIPPOCRATES**Mrs. M. C. Darnell, Frankfort.**

"The Father of Medicine": In the ancient land
of Greece

This was the appellation of one Hippocrates.
For centuries this title to him has ever clung,
But there's a heroine of that land whose name
is yet unsung—

Mrs. Hippocrates.

When he was out for hours on a bad case
of OB,

Who kept his lunch all ready, from twelve
till half past three?

Or changed his tunic buttons while he took a
hasty splash,

When to a suffering patient preparing next
to dash?

Mrs. Hippocrates.

If he were out at midnight in a bitter, chilling
storm,

Who crept into his hollow in the bed to keep
it warm?

Or if he were enjoying an after-dinner nap,
Who said (in Greek), "Now kids, be still, and
don't wake up your pap?"

Mrs. Hippocrates.

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Ice may be ice, but ice just cannot be
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are taken in its manufacture. Many
modern day foods and drinks call for
ice to be a digestible part of their serv-
ing.

In emphasizing that you specify for
health — by insisting on clean, pure
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referring to the "shodding of the cob-
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rus or Iscariot?

Who acted as a buffer against domestic shocks,
And tried her best to keep him from buying
worthless stocks?

Mrs. Hippocrates.

In a risky operation, if his prominent patient
died,

Who still assured the doctor that his course
was justified?

Or if a treatment were successful and diagnosis
right,

Who listened to his gloating, far, far into the
night?

Mrs. Hippocrates.

Who was on the job each minute of the longest
day and night?

Whose social life was always subject to the
patient's plight?

Who had her choice of staying away from
many a ball,

Or of going unescorted, when her husband had
a call?

Mrs. Hippocrates.

And since a doctor's wife is said to be his
finest ad,

What woman kept on smiling when she was
hopping mad?

And bought a new spring outfit that was far
beyond her purse

To try to look like a million, though she never
had felt worse?

Mrs. Hippocrates.

But when on a monotonous, forlorn, and
dreary day

A morsel of choice gossip would chance to
come her way

That she'd like to tell her neighbor while it
still was new and fresh,

Her husband would command her with a frown-
ing visage, "Shh!"

Poor, frustrated Mrs. Hippocrates!

From Hippocrates to McCormack these noble
doctors stand;

We praise them and we honor them—a most
illustrious band!

But even so, it is not good that man should
be alone,

So we pay our tribute also to the power be-
hind the throne—

Mrs. Hippocrates.

Proceedings of the
**SIXTEENTH ANNUAL MEETING OF THE
 WOMAN'S AUXILIARY**
 to the
KENTUCKY STATE MEDICAL ASSOCIATION
 Held at

Louisville, Kentucky, October 3-6, 1938

(Continued From April Issue)

**REPORT OF THE ANNUAL MEETING OF
 THE WOMAN'S AUXILIARY TO THE
 SOUTHERN MEDICAL ASSOCIATION**

The Woman's Auxiliary to the Southern Medical Association held its fourteenth annual meeting November 30, December 1, 2, 3, 1937 in New Orleans, Louisiana, with headquarters and meeting places in the Roosevelt Hotel.

Tuesday, November 30th, Registration for the visiting ladies was scheduled for 9 A. M. At 8 o'clock that evening there was a general Public Session in the Municipal Auditorium.

The Executive Board met at breakfast in a private dining room Wednesday morning, December 1st at 8 o'clock with Mrs. Frank N. Haggard, President, presiding. Roll call showed 23 members present and 12 states represented. At 10 o'clock the first general session was held in the Gold Room, all women attending the Southern Medical Association meeting were cordially invited.

Minutes, Reports and Announcements heard.

Mrs. Luther Bach, Bellevue, Kentucky, President Elect and Mrs. Frank K. Boland, Atlanta, Georgia, wife of the President of the Southern Medical Association were presented.

The ladies met at 12:30 luncheon in the Vieux Carre where the food and atmosphere were both delightful. Special guides conducted the guests on a walking tour through the old French quarters where we hobbled along over the old cobble stones, brought into this country as ballast in the hull of the ships that

brought the earliest settlers. And we peeped into the loveliest and most secluded patios and browsed through the antique shops where thousands of dollars in furniture, silver and glass are collected for American buyers.

We visited the cells in the Cabildo where the La Fitte's, most notorious pirates of the Louisiana bayous were held.

The original Little Theatre that was once a former governor's home was most interesting. At the end of the tour coffee and Pralines were served in Madame John's Legacy.

A general session of the Southern Medical Association was held that evening at 8 o'clock. The addresses of welcome and the President's address were enjoyed by all.

Thursday morning, December 2nd at 9 o'clock the golf enthusiasts met at Metairie Golf Club to take part in the tournament. At 12:30 the annual luncheon concluded the business session for the ladies. Mrs. Frank Haggard, presiding, and Mrs. W. K. West acted as toast-mistress. There were greetings from the Southern Medical Association and from the Orleans Parish Medical Society and from the Woman's Auxiliary to the American Medical Association. An address was given by Dr. Frank K. Boland, President of the Southern Medical Association, Atlanta, Georgia.

Delightful music was furnished by a group of students from Newcomb College and Tulane University, under the direction of Mr. Maynard Kline. Annual reports and installation of officers concluded the meeting.

An automobile tour was planned for the afternoon to include Lake Shore Drive, Shushan Air Port and trips to a couple of the oldest colonial homes in New Orleans.

Thursday morning, December 3rd at 9 o'clock the yacht, Louisiana, docked at Ead's Plaza at the foot of Canal Street and took all guests on a Harbor trip. Guides pointed out banana freighters just in with their cargo from South America.

New Orleans is a delightful City to visit and we were all very happy to be so graciously entertained there by the Southern Medical Association.

Respectfully submitted,

(Mrs. Richard T.) JULIELEE K. HUDSON

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REPORT OF HISTORICAL COLLECTIONS

The work of this Committee, dating from January 1927, has at last developed into what promises to be worthwhile results. And, if no unforeseen mishaps occur, perhaps all the necessary data for writing the Medical History of Kentucky will be accumulated and available to whomsoever the Kentucky State Medical Association designates to write that history. For, well-organized, systematic collection of Kentucky's medical historical facts is being conducted by 40 paid workers of the Works Progress Administration under the supervision of Miss Louise Morel, an Honorary Member of the Jefferson County Medical Auxiliary. This detail research has been in progress since September, 1937, beginning with a few workers, and with headquarters at the State Department of Health. The offices are on the top floor.

Miss Morel invites us all to visit the Project and see for ourselves how this work, begun by the Auxiliary in a small way, has developed into quite surprising magnitude. Kentucky has a wealth of medical historical data. But, until recently, it was amazingly scattered and, mostly, unknown.

The work of this immediate Committee has amounted to little this year.

Two biographies have been collected: Dr. Charles Garrard Daughtery, Paris, Kentucky, and Dr. Wm. T. Little, Calvert City, Kentucky. Two clippings from newspapers, concerning Dr. Little and one clipping from the Masonic Home Journal concerning Dr. Daughtery.

Ten letters requesting historical data have been written. No answers, received.

Respectfully Submitted,

(Mrs. V. A.) MAY COLEMAN STILLEY,
Chairman

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REPORT OF CAMPBELL-KENTON COUNTIES

The Woman's Auxiliary of the Campbell-Kenton County Medical Society submits the following report for the year 1937-1938.

Number of active members—16.

Number of meetings held—8.

Programs consisted of:

1. A review of the book "Shadow on the Land"—given by Dr. Helen Lanting.

2. Talk on Prenatal Care—by Miss Stella Graessle R. N. A Red Cross Class were guests.

3. A review of the Life and Work of Dr. Rosalie Slaughter Martin—given by Miss Helen May Young R. N.

4. Talk given at banquet meeting by Mrs. West of the Cincinnati Post on the Problems of Youth.

Activities of the Auxiliary were:

1. Hostess to the Licking Valley Auxiliary in Covington in March.

2. Sent clothing and dolls to Mary Breckinridge for Frontier Nursing Service and also to a local charity.

3. Individual members assisted in the work of the Woman's Field Army for Cancer Control.

Respectfully Submitted

(Mrs. J. Hadley) IDA W. CALDWELL,

President

REPORT OF HARDIN COUNTY

The Hardin County Medical Auxiliary started its 1937-38 year by conducting a lunch stand during the Kentucky Education Association convention in Elizabethtown last October. Our net proceeds were only fourteen dollars but that amount helped our tuberculosis fund quite a bit. We hope to have another such food stand during the convention this month and, profiting from our past experience, make more money out of it.

In November the Auxiliary held an all-day sewing during which the members made gowns and bed slippers for the indigent tubercular patients of the county.

For Christmas, the Auxiliary sent boxes to Hazelwood Sanitorium. The boxes contained a

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variety of useful gifts and seemed to be appreciated greatly by the Hazelwood patients who commented that they were the only ones they received.

Mrs. R. T. Layman, vice-president of the Auxiliary, was chairman of the Tuberculosis Christmas Seal drive for Hardin County. Proceeds were \$138.49.

In February the Auxiliary put on a Womanless Wedding and Style Show which proved to be a great success, netting us one hundred dollars. Fifty dollars of it went to the Rotary Club for the Crippled Children Society and the other fifty was put into our tubercular fund. Out of that Fund we are always buying supplies for our indigent tubercular patients, sending them blankets, hot water bottles, fruit and any other articles which are needed for their comfort. Our members pay visits to these patients quite frequently, so that we can be sure of what they need.

Mrs. Garnett Bale, President of the Auxiliary, was Co-Chairman for Hardin County for the Crippled Children Drive in April. Hardin County rallied so well to the call that its quota was filled and then Two Hundred Dollars more was turned in, besides.

Mrs. R. T. Layman assisted in sponsoring a talk on Cancer. It was held at the Court House and was open to the public. Mrs. J. M. English sponsored a talk on Syphilis, also held at the Court House for the public.

There was a luncheon at the Taylor Hotel for members of the Hardin County Auxiliary and members of the Jefferson County Auxiliary on April fourteenth. We were delighted to have quite a few of the Jefferson County members attend.

Mrs. George Woodard reports that her uncle, the late Dr. Jimmie Jones, has left his entire medical library to her. Mrs. Woodward intends to give it to the Jane Todd Crawford Memorial and to the Doctor's Shop.

During the summer, the extent of the Auxiliary's activities has been to visit the tubercular patients and to see that they had what they needed. Now we intend to get into full swing

again immediately, to raise more money for our Fund and to keep the public interested in helping those in the county who need help.

Respectfully submitted,
(Mrs. Garnett) JOY FIELD BALE,
President

REPORT OF JEFFERSON COUNTY

Immediately after the installation of new officers at the annual meeting last December, the year's program was outlined with philanthropic and educational work the main objectives.

During the first six months the Sewing Unit under the able direction of Mrs. George C. Leachman, assisted by Mrs. Louise Langolff and Mrs. James S. Lutz, has made 313 articles including layettes, sheets, pillow cases, towels and masks. Twelve dozen masks and four dozen towels were made for the Children's Free Hospital. The layettes, sheets and pillowcases have been distributed to needy families through the Social Service Bureau of the City Hospital. One of these layettes was sent with the State Exhibit to the A. M. A. meeting in San Francisco in June.

The Hospital and Welfare Committee, Mrs. John M. Keaney, chairman, assisted by Mrs. Oscar O. Miller, spread a little Christmas Cheer at the Children's Hospital and the City Hospital. A Christmas tree was trimmed and toys and candy and fruits were given the little tots in the "Homesick" Ward at the Children's Hospital. Trees were trimmed in the two Psychopathic Wards at the City Hospital and playing cards, jig-saw puzzles, checkers and other games as well as candy and fruit were left for the patients. A birthday party for a group of girls at the Waverly Hills Sanatorium was given the last of December. We had a little present for each girl with an extra gift for the girls who had birthdays during that month. One of our members played the piano and everyone joined in the singing and then home-made cakes and ice cream ended the little party which, I am sure, the Auxiliary Members enjoyed much more than the girls.

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Another philanthropic project which we have been talking about all this year is the establishment of a Benevolent Fund for widows and orphans of the Jefferson County Medical Society. The beginning of our interest in the subject dates back to a visit to the Poor House on one of our Come and See Trips. There we found the widows of two Jefferson County physicians. It seemed to us then that if we could find some way to help these women and others to help themselves we would be serving the Medical Profession in a useful way. The first problem, of course, is money to start this project and we now have a committee working on Ways and Means of raising some and we hope to have at least a small fund by the end of this year.

A book shower for the benefit of the Jane Todd Crawford Memorial Library at Greensburg was conducted by Mrs. George A. Hendon, Chairman of the Jane Todd Crawford Committee. A total of 104 books and 229 magazines was collected.

One of our most important health educational programs are the ten minute health talks given over Radio Station WAVE every other Tuesday by eminent Louisville Physicians. Mrs. J. Duffy Hancock handled this program in a most efficient manner.

Under the direction of Mrs. Joseph F. Dusch, our Tuberculosis Seal sale was a great success. In the four booths which we served the sale amounted to more than \$250.00. About 22 women helped in this work.

Our members also served in booths during the Infantile Paralysis, Cancer Control, and the Crippled Children campaigns.

For our own enlightenment, we chose Medical Economics as the subject of our Study Class this year. We have had such Physicians as Doctors Virgil Simpson, Irvin Abell, A. T. McCormack and A. Clayton McCarty discuss this vital subject for us. The Chairman, Mrs. Joseph E. Wier, has been tireless in her efforts to bring us a better understanding of what is happening to the Medical Profession. The Public Relations Chairman, Mrs. A. T. McCormack, has assisted her by writing let-

ters to all of the Women's Clubs in Louisville inviting them to hear these lectures.

Another of our self-education projects was a class in Parliamentary Law with Mrs. S. C. McCoy as chairman. This six-weeks course conducted by Mrs. John L. Woodbury was held in the Library of the State Department of Health. Twenty-five members were enrolled.

Mrs. John K. Freeman, Chairman of the Historical Collection has several new names to add to our collection of Biographies of Jefferson County Physicians.

Mrs. J. Rivers Wright is collecting newspaper publicity for our Archives.

Mrs. M. H. Mathewsian, Hygeia chairman, has several new subscriptions to report.

Mrs. J. B. Lukins is an enthusiastic seeker for contributions to the Doctor's Shop.

Several clubs have invited us to send representatives to their meetings. Mrs. S. C. McCoy has attended every meeting of the Mayor's Committee. Mrs. Thomas J. Crice represents us at the Better Films Council and Mrs. Wm. E. Fallis at the Fruit and Flower Guild.

Mrs. L. Lyne Smith is Chairman of the Committee which arranges for golf for the State Meeting.

Under the able direction of Mrs. J. Paul Keith, assisted by Mrs. E. Lee Shiflett, Mrs. R. E. Doughty and Mrs. Wm. E. Fallis, our Membership Committee has sought to recapture the interest of old members and encourage new ones to join our ranks. We now have a paid-up membership of 102 with 5 new members.

We have four regular business meetings and luncheons every year. The President-elect, Mrs. P. E. Blackerby and the Vice-president, Mrs. Charles H. Moore have charge of the program at these times. They usually procure a speak-

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er and arrange for music through our chairman, Mrs. Sidney J. Meyers. Mrs. Richard T. Hudson is Chairman of the Luncheon Committee and is assisted by Mrs. Henry C. Herrmann and Mrs. Oliver H. Kelsall. The publicity for these meetings as well as all others is in the capable hands of Mrs. Louis J. Hackett.

All this year we have been looking forward to being hostess to the Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association. It has been a privilege and a pleasure to have you as our guests and we do hope that you have enjoyed your stay enough to want to come again.

Respectfully submitted,

(Miss) GRACE STROUD,

President

REPORT OF LICKING VALLEY DISTRICT

The Woman's Auxiliary to the Licking Valley Medical Association has held four meetings during the year 1937-1938.

The first meeting of the year was held at Erlanger in October with Mrs. W. R. Houston in charge of arrangements. The program consisted of:

Paper on the Frontier Nursing Service and Mrs. Mary Breckinridge—Mrs. K. L. Stratton.

Book Review—The Citadel, Mrs. Robert Carter.

Current Events, Mrs. H. B. Slater.

Address, The Professional Man's Wife, Dr. W. G. Stott.

The second meeting was conducted at Maysville in December. The program was:

Address by the President of the Auxiliary to Southern Medical Association, one of our members, Mrs. Luther Bach, Bellevue.

Book Review, Fabulous New Orleans, Mrs. J. M. Blades.

The third meeting was held at Latonia with Mrs. C. A. Menefee in charge of arrangements. The program consisted of papers and discussions: The Doctor's Shop, Mrs. S. B. Nunnally.

Controlling Venereal Diseases, Mrs. J. W.

Dawson.

Hygeia, Mrs. W. R. Houston.

Address, Mrs. Luther Bach.

The fourth meeting was conducted at the Phoenix Hotel in Falmouth with Mrs. W. A. McKinney in charge of arrangements. The members of Falmouth gave a delightful program and Mr. Chris Wilson, Superintendent of Pendleton County Schools, gave an address on Modern Changes in Theories of Education.

We have seventeen Members who have paid dues and we have had several visitors during the year.

I have written eighty-five letters and have sent programs during the year trying to reach prospective Members from each of the ten counties included in our territory. We still have no Members from Fleming, Nicholas, or Harrison Counties but hope to have before another year passes.

Respectfully submitted,

(Mrs. J. M.) ANNA BLADES

REPORT OF MADISON COUNTY

The story of the past year is a brief one. The Madison County Medical Society called on its wives, sisters and mothers for help in entertaining the Kentucky State Medical Association. The Auxiliary was reorganized and every one responded with preparations for the welcome guests. Too soon, the 1937 meeting

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of the State Society was a thing of the past. The feeling of friendliness gained by working together, and the real appreciation of each others good qualities remains.

At one of the meetings of the Auxiliary Mrs. Jos. E. Wier and Mrs. A. T. McCormack of Louisville, were guests and spoke on the Jane Todd Crawford Memorial. Later, through the efforts and contributions of Mrs. Selby Carr, a generous contribution of seeds was sent to Mrs. McCormack. As for the next year, the prospects look very good. New and able Officers have been elected and Committees have been appointed. The Membership is but a little less than last year. The Madison County Society asked for our help. We rejoice in having a part in the fight against tuberculosis.

Respectfully Submitted

(Mrs. Robert H.) ANNA P. COWLEY,
President

Report of Work Done by Cancer Chairman of Madison County, 1937

Posters placed in buildings of Richmond where we thought they would be seen by largest number of people. Literature placed in stores, bus station, Women's Community Rest Room. A fifteen minute talk before the Richmond Woman's Club by Dr. Harvey C. Blanton on Cancer.

Respectfully Submitted,

(Mrs. R. May) MARY H. PHELPS

REPORT OF MARSHALL COUNTY

Again we must report no activities; have had no meetings; however we are holding our organization and keeping our dues paid up.

The same number of members, six, but since we have two new Doctors in the County we are hoping their wives will join us very soon. Our Auxiliary was saddened this year by the death of two of our physicians. One, Dr. W. S. Stone, was the oldest practitioner in the County and Dr. W. T. Little was probably the youngest, at the time of his death.

We are sure that in a manner, we have misstated the activities as we think that possibly the following would come under that head:

TO WIT:—Through the energetic, tireless work of Mrs. L. L. Washburn she was enabled to forward the sum of \$55.00 to Mrs. Heller for Cancer Control. Mrs. S. L. Hensen reports that \$68.18 was raised for Christmas Seal sale for Tuberculosis Control. The following contributions were made:

Jane Todd Crawford Fund\$10.00

The Quarterly 5.00

Respectfully submitted

(Mrs. V. A.) MAY COLEMAN STILLEY

Delegate

(Proceedings Concluded)

PUBLIC RELATIONS

Mrs. Jos. E. Wier, Louisville, State Chairman

"The women of the Auxiliaries should train themselves to speak before lay meetings, and be prepared to take the leadership in all Health Problems in their Communities," said Dr. W. W. Bauer, Director, Bureau of Health and Public Instruction, of the American Medical Association, in speaking to a joint Conference of the Public Relations and Program Committees at the recent Annual Meeting of the American Medical Auxiliary in St. Louis. They should be ready to make talks on Cancer, Syphilis, Tuberculosis and Child Health Problems; and he suggested each talk have a short paragraph concerning Medical Economics. A long talk on this subject is apt to bore your audience, thinks Dr. Bauer, "but a few well thought out sentences, on some phase of this subject may go far toward educating the public on this important subject." He also said: "The members of the Auxiliary would be wise to study this subject, so as to be able to present correctly and intelligently the Medical Profession's side in discussions around the luncheon and bridge tables."

In compliance with the suggestion of Dr. Bauer, brief talks on Tuberculosis, Cancer and Syphilis have been prepared for immediate use by auxiliary members before lay audiences. Copies of these may be obtained by writing Mrs. Joseph E. Wier, State Public Relation Chairman, 1605 1-2 Chichester Street, Louisville.

On the subject of Syphilis, a series of short articles, by Dr. John R. Pate, Director of the Bureau of Venereal Disease Control, of the State Department of Health, has been carried in the Kentucky School Journal, published by the Kentucky Educational Association, monthly, since February 1939, and sent to each member of Kentucky Educational Association.

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Tuberculosis



Mrs. Lucius Ernest Smith, Louisville, State Chairman.

"A STITCH IN TIME"

This quaint phrase from the language of our grandmothers is still laden with the wisdom and philosophy which enabled our thrifty forebears to endure the hardships of their day, and calmly face an existence that would seem almost unbearable to some modern wives and mothers.

Many of us can remember our mothers carefully going over the family wardrobes, searching carefully for garments that needed attention. Perhaps it was a small tear in the knee of Johnnie's trousers, or a rip in Mary's sleeves or a button ready to drop from father's shirt, but, in each instance the correct repair was made by her deft hand, and, as she folded up her work she could be heard to say "A Stitch In Time Saves Nine."

We of today seem lacking in willingness to spend time, energy or money to search out needs until they are thrust upon us in a manner demanding immediate attention and action. In fact, we seem to be rather proud that we no longer have to slave like "grandmother" did and we often hear apparently educated people say "Don't worry—What you don't know, can't hurt you".

There are some characteristics of our forebears which we should prize more highly than we do. It is true that we have many more resources than were available in the old days, but it is equally true that our apparent needs are multiplied many fold. The ease with which we can neglect matters of thrift and habits of health has encouraged us to become wasters of material resources, as well as of human life.

When we consider tuberculosis, the disease that continues to be the leading cause of death in the active period of life, we see the appalling waste of time, money and life, to say nothing of the consequent suffering and sorrow, entailed, because we have not yet learned to think in terms of the old proverb that kept grandmother looking for trouble before trouble looked for her.

A few days ago, while visiting one of our

tuberculosis hospitals, I was tremendously impressed by two patients. A young wife, 26 years of age, who has been eight months in bed, told me her story. She was working to help her husband buy a home. Yes, they had dreams of a long winding pathway that leads through enchanted grounds to a happy "somewhere". Soon after her marriage, she was tired most of the time. She sought medical advice, but, somehow, it was more than a year before the trouble was located and then there was a cavity in her lung. She went at once to the sanatorium, but the condition in her lung had advanced so far that a closed intrapleural space made pneumothorax impossible. Thus her treatment will be prolonged, and her chances for a complete cure will be diminished because the condition was not found early.

During this same visit I called on a young physician. He had examined many others for tuberculosis and never dreamed he himself might be a victim of it until there was a cavity in his lung. He is getting along nicely, but he has been in bed more than twenty months. He has a long road to travel before he will be able to resume his work and at best his case will be arrested, not cured.

The National Tuberculosis Association recently used the slogan, "Eight Out of Every Ten Come Late", meaning of course, that for every two patients who find their tuberculosis early there are eight who find it after it is far advanced. Far advanced cases can not hope to be cured. They can only be arrested at best. Then, too, they have spread the disease to others before they knew they were ill.

There is a pressing need for a wise use of our knowledge concerning tuberculosis. We must accept the responsibility of seeing that something is done in our respective communities. We are citizens. We are conscious of the need. We are in close contact with the physicians who hold in their hands the solution to the medical side of this problem.

The Kentucky Tuberculosis Association will furnish literature, pictures and speakers for the asking. Let us no longer be content to see this great destroyer stealing into the

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homes and communities of our State and claiming its victims, from year to year, because we have been too busy to do our part.

Tuberculosis can be cured, but only when it is found early. When found late, the treatment is prolonged and the cost to the patient and to the community is increased many fold.

Just as the thrifty mother used to go through the enormous pile of family garments at regular intervals looking carefully with experienced eyes, for defects that might be remedied before the garments were seriously damaged, we too must learn to have the fine boys and girls in our communities checked for signs of the presence of tuberculosis by the modern methods so well known in order that their bodies can be repaired before serious damage is done.

Grandmother was right. "A Stitch In Time Saves Nine".

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RADIO WAVES

Mrs. S. H. Flowers, Louisville, Chairman

For a Doctors Day program, a fifteen minute period was granted over Radio Station WAVE, Louisville, to the Radio Committee of the Woman's Auxiliary to the Kentucky State Medical Association, on April 13th, at 2:45 P. M. The time was used for a round table discussion of the historic record of Dr. Thomas Walker, selected, by the Executive Board of the Auxiliary at its Mid-Year Meeting, January 19th, for special honor on Doctors Day of 1939. This program will be found on p. 86 of this issue.

The State Department of Health will continue to sponsor the Radio Program, Pioneers In Health, over Station WHAS, Louisville, every Saturday afternoon at 4:00 P. M. C.S.T., beginning in the autumn, but not through the summer months. These programs have been well received. Many letters of appreciation expressing interest and enjoyment of both the historical and the instructive features in the various subjects are on file. Continued expression of Listeners-In will encourage and stimulate further development.

PURE



JANE TODD CRAWFORD MEMORIAL

MINUTES

CALLED MEMORIAL SESSION

Danville—May 20, 1939

The Woman's Auxiliary to the Kentucky State Medical Association met in a Called Session in the Jane Todd Crawford Room of the Ephraim McDowell-Jane Todd Crawford Memorial Home, Danville, on Saturday, May 20, 1939, at the close of the ceremony of Official Dedication of this Memorial. Mrs. H. V. Usher, Sedalia, President, presided and opened the meeting with a fitting tribute to the heroism of Mrs. Crawford. She expressed grateful pride that the Auxiliary was permitted to be the first organization to hold a meeting in the room in this medical shrine where Mrs. Crawford submitted to the Great Experiment known as The First Ovariectomy, the foundation of modern abdominal surgery. The President called for expressions from others present.

Mrs. A. T. McCormack, Louisville, State Chairman of the Jane Todd Crawford Memorial Committee, responded with feeling in like manner. She then announced that a small surplus was left in the fund raised to pay Kentucky's pledge of One Thousand Dollars to the Southern Medical Auxiliary for the joint Jane Todd Crawford Memorial and suggested that this surplus be used to buy tiny models of the Jane Todd Crawford Cabin, made by the State Wide Museum Project of the Works Progress Administration, for distribution in the 120 Counties of Kentucky for educational purposes.

A motion of approval of this plan, made by Mrs. James Darnell, Frankfort, seconded by Mrs. S. C. McCoy, Louisville, carried.

Continued planting on the Jane Todd Crawford Trail was reported by Mrs. McCormack, with an appeal for increasing individual interest among all Auxiliary Members in this growing development of memorializing the trail over which Mrs. Crawford rode the painful 60 miles on horseback to undergo that history-making experiment in December, 1809.

Mrs. Darnell paid a glowing tribute to Mrs. Jane Todd Crawford concluding with the statement that she had never been so impressed with a shrine as with the ceremony here today in this beautiful old home of Kentucky's great surgeon, Dr. Ephraim McDowell.

Mrs. Eleanor Hume Offutt, Frankfort, touched all hearts with her sympathetic words of understanding and struck a responsive chord as she voiced the sentiment:

"Here, I feel I am treading on Holy Ground" and concluded with a motion to adjourn following a moment of silent prayer in gratitude

to God for all that Jane Todd Crawford had done for humanity.

Auxiliary Members attending the dedication of the Ephraim McDowell-Jane Todd Crawford Memorial Home were: Mrs. P. E. Blackerby, Louisville; Mrs. James Darnell, Frankfort; Mrs. Carlos A. Fish, Frankfort; Mrs. J. Duffy Hancock, Louisville; Mrs. A. T. McCormack, Louisville; Mrs. S. C. McCoy, Louisville; Mrs. Eleanor Hume Offutt, Frankfort; Miss Mayme Sullivan, Louisville; Mrs. Harlan V. Usher, Sedalia; Mrs. Joseph E. Wier, Louisville.

Respectfully Submitted,

(Mrs. Jos. E.) HILDA STEWART WIER
Secretary Pro Tem

SOUTH CAROLINA'S MEMORIAL

South Carolina Auxiliary has provided its own State Memorial to Jane Todd Crawford.

Dr. and Mrs. A. T. McCormack and Dr. John Pate attended the Annual Meeting of the South Carolina Medical Association, at Spartanburg, where Dr. McCormack addressed the public meeting held by the Association at the Cleveland Hotel, the evening of April 11th. Next morning Mrs. McCormack, guest speaker at the Business Session of the Woman's Auxiliary, was quite thrilled with the report of each Committee Chairman, particularly, of Mrs. W. H. Powe, Chairman of the Jane Todd Crawford Committee and the presentation of the framed marker to be placed on the first Jane Todd Crawford Free Bed at the Oconee County Hospital in Seneca. A copy of the story of the First Ovariectomy, as vividly told by Mrs. T. R. W. Wilson, Greenville, S. C.—Jane Todd Crawford, 1763-1842—will be presented to each occupant of this bed. The South Carolina Auxiliary aims to place a Jane Todd Crawford Free Bed in each of the County Hospitals. A splendid State Memorial for our Pioneer Heroine of Surgery! We hope to learn of other things that States are doing to memorialize the foundation of safe abdominal surgery.

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ADVERTISERS DAY IN JEFFERSON COUNTY

Mrs. Jos. E. Wier, Advertising Manager for The Quarterly

On Monday, June 5th, in the Crystal Ballroom, at the Brown Hotel, the Woman's Auxiliary of the Jefferson County Medical Society, generously permitted the Business Managers of the Quarterly, Mrs. Wm. H. Emrich and Mrs. Joseph E. Wier, to conduct a Forum Bazaar for the benefit of our Advertisers, in place of the regular quarterly luncheon program.

This was called a Forum Bazaar because it was arranged to try to call to the attention, and to sell to our Members and their friends, the excellence and variety of the products carried by the firms advertising in our magazine. Mrs. A. T. McCormack led the discussion. Many members took part in the Forum, testifying to the fine qualities of the products they had used.

The second part of the program comprised two style shows directed by Mrs. Curt Krieger. The first one, by Renee' Dress Shop and Baynham's Shoes, and the second, by Clara Hats and Jaglowicz, the tailor, with Southern Optical Company glasses. The models were Mesdames Bernard Asman, P. E. Blackerby, C. M. Bernhard, F. J. Dougherty, W. McDaniel Ewing, S. H. Flowers, Henry C. Hermann,

A. T. McCormack, S. C. McCoy, Carlisle Morse, H. V. Lancaster; Dr. Lillian South Tye. Misses Helen Asman, Mary Blackerby, Betty Lancaster, Sallie Sandidge.

Last but not least in interest, was the awarding of the gifts donated by the Advertisers. Mrs. Bernard Asman and Mrs. Stephen McCoy had charge of the drawing. These were won by:

B. & W. Imorde—Chocolate cake—Mrs. A. T. Guardhouse.

Buttermann Ice Cream Company—1-2 gallon ice cream—Mrs. J. W. Sams.

Bornwasser's Cafeteria—Chocolate cake, large size—Dr. Lillian South-Tye.

Cherokee Dairies—2 pound box of candy—Mrs. M. W. Ganz.

Dolfinger China Co., Inc.—Green Glass Flower Basket—Miss Lulu Guardhouse.

Emmart Packing Company—Sausage, 1 pound, Mrs. Walter I. Hume; 1 pound, Mrs. P. E. Plamp; 1 pound, Mrs. J. Rivers Wright.

Ewing-Von Allmen—8 Individual Party Ices—Mrs. J. B. Lukins.; 1 quart of milk for 1 month—Mrs. P. E. Blackerby.

Geher & Sons—Chromium salad mold—Mrs. Curt H. Krieger.

Hirsch Bros. & Co.—Ornamental basket filled with condiments, pickles, salad dressings, etc.—Mrs. L. E. Smith.

Kentucky Dairies Inc.—Ornamental glass Tomato juice set—Mrs. H. V. Lancaster.

Mayes Printing Company—Stationery, with name & address—Mrs. Frank Daugherty.

Mimi's Beauty Salon—Service—Mrs. Paul A. Turner.

Minish & Potts—Flowering potted plant—Mrs. George Wilson.

Moon Gate Shop—Bud vase—Mrs. I. T. Fugate.

Piggly-Wiggly—Canned goods—6 cans—Mrs. Ray Carlson; 6 cans—Mrs. Elizabeth Muench.

Powell Seed Company—Potted flowering rose—Mrs. M. C. Baker.

Sherwin-Williams Company—\$3.00 order for washable wall paper—Mrs. M. H. Mathewsian.

Favors provided for every woman in attendance to take home were generously donated by:

Grocers Baking Company—Announcement of new Telephone Time Service.

Hampton Cracker Company—Box of Crack-in' Good Crackers.

Stoll Oil Refining Company—Note Book.

Wheatley Mayonnaise Company—Sample of French Dressing for salads.

W. P. Huston Insurance Agency—Pencil.

The Business Managers of the Quarterly wish to extend thanks to the many women who helped them in the arrangement of this program and to all the Advertisers in the Quarterly for their splendid cooperation.

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THE HOLY DARK

Eleanor Hume Offutt, Jr., Frankfort

It was late at night when Doctor Williams unlocked the great front door of the rambling old house. He tried to close it softly but the hinges creaked loudly enough to raise the house. "Is it you, John?" his wife asked.

"Yes, Martha," he answered. "I am sorry that I am so late but I had to stay with Robert for a while."

"You must be very tired," Martha said. "Better hurry right to bed. I'll put out the lights."

"I have had a hard day," he sighed, "and I want to sleep a little late in the morning."

"You had better close the shutters because Bobby wakes up at the crack of dawn and you know he always wakes you, too."

Doctor Williams closed the shutters as tightly as possible and then went to bed.

The next morning at five o'clock, Bobby awoke promptly and gave his father a vigorous punch. His father answered with a sigh.

"Wake up, Daddy! It's morning," he shouted.

"No, No, son", his father replied, "its night. Don't you see the dark?"

Bobby was a bit bewildered by the fact that it was dark; however, small strips of light were coming through the openings in the shutters. Bobby did not exactly understand. "Daddy", he said, very puzzled, "Daddy, that dark's got holes in it!"

THE OLD DOCTOR

Eleanor Hume Offutt, Frankfort,

His suits were shabby and his shoulders bent
From leaning over sick-beds thru the years.
His eyes grown dim, beneath their beetling
brows,

From being often filled with kindly tears.
He shared the happiness and griefs of all,

His patient's sorrow was his woe,
And when some younger doctor asked

If this or that man paid his debt or no
His voice grew grim, his face was set

"I've served mankind for forty years
And never asked that question yet!"

He gave the poor their medicines and food
And all his care and love beside.

To nurse a stricken dog or wounded bird
Or any of God's creatures was his pride.

And tho' I cannot tell you half his deeds
Of kindness and love, I cannot sing,

I know that when God called for him above
It must have been to mend some angel's

wing.

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News From The Counties

CAMPBELL-KENTON

Various members of the Campbell-Kenton and Licking Valley Auxiliaries assisted in the recent Cancer Control Program held in April. Over 1200 persons in Campbell-Kenton Counties were reached by group talks given by local physicians.

Several members of the Auxiliaries volunteered their services in the recent drive to raise funds for the benefit of the Booth Memorial Hospital of Covington, Ky.

Dr. and Mrs. Luther Bach, of Bellevue, are greatly pleased by the recognition given their two sons, Byron and Lysle for their excellent performances in the recent music contest of the Kentucky High Schools. Byron received Superior Rating for his performance on Cello and the Tuba. Lysle received superior rating for his performance on the Flute.

Births in Campbell County—a boy to Dr. and Mrs. A. F. Schultz of Bellevue.

A boy to Dr. and Mrs. W. I. Huesing, of Ft. Thomas,

Campbell-Kenton Auxiliary held their annual banquet at the Canary Cottage in Cincinnati on May 4, 1939.

The following officers were elected and installed.

Mrs. J. E. Dawson—President.

Mrs. G. VanDerMark—Vice-President.

Mrs. H. C. White—Secretary & Treasurer.

After which the ladies were entertained by the following program:

A reading given by Mrs. Kenneth Bowen.
Two Readings given by Mildred Vincent
Twelve members were present. An enjoyable time had by all.

Members of the Campbell-Kenton Auxiliary voted as a majority in favor of the Student loan fund for the Jane Todd Crawford Memorial.

NEWS FROM FRANKLIN COUNTY

(Ed Note: Received too late for publication in the April issue, were the following appointments for the Franklin County Auxiliary.)

Advisory Council

Dr. R. M. Coblin, Dr. Lawrence T. Minnish, Dr. Grace Snyder, all of Frankfort.

Committee Chairmen and Co-Chairmen

(All of Frankfort)

Cancer—Mrs. Will Walker Ward, Louisville Road, Mrs. John Dowling Stewart, Lawrenceburg Road.

Publicity—Mrs. Reba Burrow Flynn, 617 Shelby Street.

Public Relations—Mrs. James Darnell, 216 Conway Street, Mrs. Finis Mace Travis, 732 Shelby Street.

Tuberculosis—Mrs. Lawrence T. Minnish, 121 West Fourth Street, Mrs. Jack Marshall, 103 Lafayette Road.

The Franklin County Auxiliary met at the home of Dr. and Mrs. John G. South, Frankfort, Thursday evening, March 9th, for the regular monthly meeting, the President, Mrs. Joseph Barr, presiding. Mrs. H. V. Usher, Sedalia, State President, was honor guest and spoke at the Business Session. Plans were made for raising funds for charity work; A social hour followed during which refreshments were served in the dining room, made festive with pink candles in a beautiful silver candelabra and spring flowers decorating the table. 14 were present.



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An all-day sewing party gathered at the home of Dr. and Mrs. John G. South, Thursday, May 11th. 16 were present, sewing on layettes for the Red Cross and other garments and toys for the Christmas Box to go to the mountains. Guests from Louisville, Mrs. S. C. McCoy and Mrs. A. T. McCormack, arrived about 10:30 and joined in the program of the day. A delicious luncheon was served by the hostess at noon, when the Special Committee from the Medical Society—Dr. R. M. Coblin, Dr. F. M. Travis, and Dr. E. K. Martin, also joined the group and discussed the future plans for Auxiliary activity. A beautiful quilt made by Mrs. South and her cousin, Mrs. Edwin Morrow, was presented to the Auxiliary for money-raising purposes, and which the Louisville guests invited them to display at the Forum Bazaar of the Jefferson County Auxiliary to be held at the Brown Hotel on Monday, June 5th. Plants, bulbs and shrubs were donated for planting on the Jane Todd Crawford Trail and taken to Danville by Dr. A. T. McCormack and given to local Chairmen, there.

GRAVES COUNTY

Doctors Day, Thursday, April 13th, was observed by the Graves County Auxiliary with a Program Tea at the home of Dr. and Mrs. H. H. Hunt. Spring flowers in profusion, decorated the rooms, lending a festive spirit to the occasion. Mrs. J. H. Shelton, President, presided in her usual graceful manner. Mrs. H. V. Usher, our State President, gave an interesting sketch of the life of Dr. Thomas Walker, the first white man to build a house in Kentucky. Mrs. D. H. Ray described her recent trip to Williamsburg. Attending, were: Mrs. R. G. Ashley, Mrs. George T. Fuller, First President of Graves County; Mrs. W. J. Shelton, Mrs. J. H. Shelton, Mrs. M. W. Hurt, Mrs. Laura Skinner, Mrs. H. V. Usher, Mrs. D. H. Ray, Mrs. W. T. Vaughan, Mrs. H. H. Hunt.

Graves County Auxiliary has eleven members with prospects for more.

Mrs. W. J. Shelton is busily at work placing Hygeia in both city and county.

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The birth of the Lyon quintuplets, all boys, was recorded on April 29, 1896, the only quintuplets born in the United States. The babies lived from 4 to 14 days, and their bodies are now in the Smithsonian Museum in Washington. The birthday anniversary of the quintuplets finds the mother, Mrs. Elizabeth Lyon of Kevil, Kentucky, still longing to visit the Dionne quintuplets in Canada.

At about ten o'clock, Saturday, April 22, thirteen members of the Luther Carson Riding Club, Paducah, arrived on horseback at High Content Farm, home of Dr. and Mrs. Earl C. Walters, on the western edge of Mayfield. within six hours of their starting time, a distance of 26 miles.

A barbecue luncheon was served on the lawn by Dr. and Mrs. Walters, greatly enjoyed by the riders and other guests who joined them. The return trip to Paducah was made the next day.

HARDIN

Doctors Day, Thursday, April 13th, was observed by the Hardin County Auxiliary with a delightful luncheon at the home of Dr. and Mrs. George Bradley. Present were 18 guests, Doctors and their wives.

Following the luncheon a paper on Dr. Thomas Walker was read by Mrs. R. T. Layman. Then, since April is Early Diagnosis Campaign month, as designated by the National Tuberculosis Association, talks on this

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subject were made by the following physicians: Dr. D. M. McClure, Dr. George Bradley, Dr. R. T. Layman, all of Elizabethtown; and by Dr. C. W. Rogers, Rineyville. Mrs. Leslie P. Herd, our new President, outlined her plans for the next year's work and Mrs. Walter Scott discussed social service activities.

Little Miss Barbara Bale arrived April 10th, at the Baptist Hospital to live with Dr. and Mrs. Garnett Bale. Mrs. Bale is our immediate past president.

Mrs. J. I. Taylor has returned from the Baptist Hospital where she submitted to a minor operation.

Dr. Millard Bethel and Mrs. Bethel of Concord, North Carolina, visited his parents, Mr. and Mrs. Wm. Bethel for two weeks during May.

Dr. and Mrs. H. R. Nusz of Cecilia have moved to Elizabethtown to make their home.

JEFFERSON

As a contribution to the community welfare, a series of public health lectures, open to the public, was sponsored by the Study Group of the Woman's Auxiliary to the Jefferson County Medical Society. Mrs. Octavius Dulaney is Chairman of the Study Group. The meetings were held the first Monday of the month at the Brown Hotel, Louisville, and included the following subjects discussed by members of the Jefferson County Medical Society:

February 6—Psychiatry—Dr. Thomas J. Crise.

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National Health Program—Dr. P. E. Blackerby.

March 6—Sight Saving Classes—Dr. Adolph O. Pfingst.

April 3—Prevention of Heart Disease—Dr. Emmet F. Horine.

May 1—Getting Ready For School—Dr. James W. Bruce.

May 1st was the beginning of Child Health Week observed throughout the Country, following a National Proclamation by President Roosevelt and a State Proclamation by Governor Chandler. Dr. Bruce's lecture was arranged as a fitting observance of this occasion.

To Dr. Paul Stanley Emrich and Mrs. Emrich, recently moved from Richmond, Kentucky, to Kinston, North Carolina, a daughter, weighing 7 3/4 pounds, was born on Saturday, June 3rd. Little Miss Mary Margaret is the first grandchild of Dr. Wm. Emrich and Mrs. Emrich, Louisville.

Mrs. William H. Emrich, Business Manager of The Quarterly, is visiting her son, Dr. Paul S. Emrich and Mrs. Emrich and little daughter, in Kinston, North Carolina.

MARSHALL

Newly elected Officers of the Marshall County Auxiliary are:

President—Mrs. Samuel L. Henson, Benton.

Vice-President—Mrs. F. G. Estridge, Gilbertsville.

Secretary-Treasurer—Mrs. N. E. Green, Calvert City.

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Mrs. W. S. Stone, Benton, our former President, has accepted a position at Western State Hospital, Hopkinsville.

Mrs. Wm. T. Little, Calvert City, is recovering from an automobile accident after several days in a hospital in Paducah.

MERCER

The Woman's Auxiliary to the Madison County Medical Society has re-organized with the following new Officers, all of Harrodsburg:

President—Mrs. Wallace Chapman.

Vice-President—Mrs. J. Tom Price.

Secretary-Treasurer—Mrs. Robert J. Ballard.

Historian—Mrs. Hunter Coleman—Committee Chairmen.

Hygeia—Mrs. Greene L. Johnson.

Jane Todd Crawford Memorial—Mrs. G. E. Lowry.

Public Relations—Mrs. Curtis Park.

Tuberculosis—Mrs. E. V. Seay.

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SAMPSON COMMUNITY HOSPITAL AUXILIARY NEWS

Dr. and Mrs. C. C. Turner, Dr. and Mrs. Oren R. Beatty, Drs. C. C. Howard, Clifton Richards and C. R. Markwood attended the Annual Meeting of the American Medical Association in St. Louis.

Miss Mary Lucy Smith and Dr. Rex Hayes were married May 20th, 1939, at the Christian Church, Glasgow. After a trip through the East, which included the World's Fair, they are at home at the Williams Apartment, Race St., Glasgow.

Hospital Day was observed at the T. J. Sampson Community Hospital, May 12th, with a large and interested crowd of visitors during the day. The Annual Baby Party was enjoyed by about forty babies who had been born there. Miss Black, assisted by the nurses, presented them with favors and served delightful refreshments to every one.

The T. J. Sampson Community Hospital Auxiliary met May 23rd at Cherry's Coffee Shop. After a delightful lunch, the Business Meeting and program followed with addresses on "Pioneer Doctors".

Green County—Mrs. J. C. Graham, Greensburg.

Cumberland County—Mrs. W. F. Owsley, Burksville. Mrs. H. G. Davis, Glasgow.

The Auxiliary in Barren County worked in cooperation with the Woman's Club in the Cancer Control Drive, Mrs. Clifton Richards and Mrs. Louis Redford, leaders. A total of \$182.68 was raised and the literature was widely distributed over the county.

Dr. C. C. Turner, Glasgow, spoke on Cancer to the Women of both Clubs and Dr. Blackburn, of Bowling Green, spoke in Cave City to the people of that section.

Miss Lois Howard, daughter of Dr. and Mrs. C. C. Howard, was elected first attendant to the May Queen at Transylvania, Lexington.

Mr. C. G. Depp, Jr., who has been attending the University of Kentucky has returned to his home at Hiseville to spend the summer vacation with his parents, Dr. and Mrs. C. G. Depp.

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KENTUCKY MEDICAL JOURNAL PART II

WOMAN'S AUXILIARY SECTION

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PRESIDENT'S MESSAGE

Mrs. R. T. Layman, Elizabethtown

When the October issue of the Quarterly appears, our convention at Bowling Green will be over, and I shall have the honor of acting as your new President. In this capacity, I hope that I shall be able to serve you efficiently.

As our Auxiliary is made up of doctors' wives, widows, mothers, daughters and sisters, it is my earnest desire for each to become an active and ambitious Auxiliary Member. This duty, each Member owes to the medical profession. Proudly affiliated with the greatest of the professions, we wives of physicians, must measure up to the high standard of modern organized medicine.

I realize my office is one of responsibility. In order to meet its requirements, I need your active support. With the gavel, an emblem of authority and action, placed in my hands, it is my sincere desire that you never have cause to regret having vested this authority in me. I shall greatly appreciate any suggestions you make to increase our usefulness and to create more interest in our Auxiliary activities.

PAST PRESIDENT'S MESSAGE

Mrs. H. V. Usher, Sedalia

I am very proud of the work that has been done in our State this year by our Auxiliary.

I want to express my sincere appreciation to every State Officer, Committee Chairman, County President and all members, for your splendid cooperation, and wonderful achievements; your reports are proof that you have been busy carrying out the Achievement Project, our program for the year.

When this reaches you, I will have finished my year as your President. It has been a great pleasure to work with you and to serve you as your pilot. The Chairman of each project has done a very satisfactory piece of work, for which I am grateful.

These seventeen years of our State Auxiliary organization have brought to the members a greater appreciation of the splendid service rendered to fellow citizens by physicians. One of the greatest privileges, and opportunities for service that comes to a doctor's wife is that of creating and maintain-

(Please turn to Page 113)

Remember the early Tuberculosis signs can be seen with an X-ray before they can be heard with a stethoscope. Make use of these modern aids to early diagnosis. Christmas Seals support these splendid life saving programs. Do your bit.

-:- EDITORIALS -:-

KNOW KENTUCKY

"Know The Truth And The Truth Shall Make You Free"

The President of the American Medical Auxiliary, Mrs. Rollo K. Packard, advised Auxiliary Members at our recent State Annual Meeting in Bowling Green, to further Public Relations and Health Education as definite objectives in Auxiliary work this year.

In order to do this intelligently, we must, ourselves, be informed. Previous Study Classes in Medical History, Medical Economics, State and National Health Laws and the Health Education leaflets sent out in Study Envelopes by the A. M. A. have given us some much needed information.

Now comes a splendid opportunity to learn, definitely, facts about Kentucky in the recently published Report of The Committee on Medical Economics of the Kentucky State Medical Association. A chance to know our Kentucky problems in the field of Medical Economics! And, really knowing a problem makes it easier to solve!

This Report, with the exception of the Recommendations on Pages 28-29, was accepted by the House of Delegates of the Kentucky State Medical Association at the recent Annual Meeting in Bowling Green.

In this volume, 207 pages, sent to each Member of the Kentucky State Medical Association and to each Member of the Woman's Auxiliary, we may learn much detail about Kentucky, hitherto not easily available. Each County is surveyed. Instructive and helpful summaries under separate headings are written for the State, as a whole, and illustrated with maps and graphs.

This is excellent material for Study Classes. It is, also, readily comprehended, if read, alone, for simple English is used throughout and uniform tabulations make comparisons easy.

Why not learn about our own County and its relation to our own State in an early Study Class where we can discuss these intimate interests? Then continue until we really know all the Counties, know our State. "Know thyself."

"To thine own self be true, and it must follow—

Thou canst not then be false to any man."

Don't forget to buy and use Christmas Seals. They spread a message of Tuberculosis control and prevention that is vital to the good health of all.

COME TO THE SOUTHERN

The Southern Medical Association and Woman's Auxiliary will meet in Memphis, Tennessee for the Annual Meeting, November 21-24.

Just next door to Kentucky, Memphis extends a hearty welcome to you to spend these four profitable and delightfully entertaining days with other Southern Members in this Metropolis on the Mississippi. Auxiliary headquarters will be at the Peabody Hotel.

A. M. A. HANDBOOK FOR STATE AUXILIARY OFFICERS

All Kentucky State Officers and Chairmen and County Presidents were provided in 1933, with a copy of the first edition of the Handbook prepared by the American Medical Auxiliary for Auxiliary procedure, with the request that each copy be passed on to the next succeeding Officer, Chairmen and County President, as a most important aid and guide toward success. Few of these copies are now to be found.

The News Letter of the American Medical Auxiliary carries an announcement that the Chairman of Printing and Supplies can now supply copies of the revised edition at forty cents, each. Write Mrs. Frank E. Coffey, Chairman, Printing and Supplies, American Medical Auxiliary, 1910 Fort Street, Hays, Kansas, for your copy.

A MOTORIST'S PRAYER

Give me a steady hand and watchful eye
That no man may be hurt when I pass by.

Thou gavest life.

I pray no act of mine

May take or mar that gift of Thine.

Shelter those, dear Lord, who bear me company

From evils of fire and all calamity.

Teach me to use my car for others' need,
Nor miss through love of speed the beauties of Thy World,

That thus I may with joy and courtesy go on my way.

(Rev. H. E. Boulthbee, pastor of Lower Bebbington Parish Church, England)

I expect to pass through this life but once.

If, therefore, there is any kindness I can show,

Or any good I can do any fellow being,
Let me do it now,

For I shall not pass this way again.

—Anonymous

Achievement Project---County Auxiliary Development

Mrs. R. T. Layman, President, Elizabethtown

Beginning September 14, 1939—Ending at Annual Meeting, 1940

Program For 1939-1940

Each County should keep a record of every item of achievement and send monthly report to State Program Chairman, Mrs. H. V. Usher, Sedalia.

Award—Blue Ribbon.

Judging Standards—All ratings based on membership percentage at beginning of Year.

To win, small organizations have as good chance as large organizations.

List of Credits for Award to County Auxiliary for Outstanding Achievement.

- | | Points |
|--|--------|
| 1. State and National Dues paid by 31st of March, 1940 | 2½ |
| 2. Advisory Council from local Medical Society | 2½ |
| 3. All Communications pertaining to Auxiliary Work answered immediately | 2½ |
| 4. Names of Newly elected Officers and Committee Chairmen sent immediately to State President, and to Editor of the Quarterly.. | 2½ |
| 5. Report of Year's work sent to State President by August 1st .. | 2½ |
| 6. Delegate Representation and Report of Year's Work presented at Annual Meeting | 2½ |
| 7. Program Plans for Year's Work made in advance, when New Officers are elected, and copies sent to State President and State Program Chairman | 5 |
| 8. One or more Health Education Programs during the year, open to the public or to representatives of lay organizations | 10 |
| 9. Provide Speakers on Health Subjects for lay organizations. (Parent-Teacher, Church Groups, Women's Clubs, etc.) | 10 |
| 10. Active participation in some project for community betterment such as assisting Women's Field Army for Cancer Control | 10 |
| 11. Give a program designed to popularize approval of the New Pre-Marital Health Examination Law re Venereal Diseases | 15 |
| 12. Increase in Hygeia subscriptions, based on membership at the beginning of year | 5 |
| 13. Gift of Hygeia Subscriptions to Local Libraries and Schools | 5 |
| 14. Full Staff of Active Chairmen—or as many as Membership of County Auxiliary allows—to correspond with State and National Auxiliary. | 5 |
| 15. Increase in Membership (Percentage basis) | 5 |
| 16. Observance of Doctor's day for date designated | 10 |
| 17. Doctor Shop Donation—for each item | 2½-10 |
| 18. Jane Todd Crawford Day Observance, December 13th | 10 |
| 19. Jane Todd Crawford Trail planting donations; for each lot | 2½-10 |
| 20. Cooperation in financial support of Quarterly and contributions published in the Quarterly (sent to Editor by 1st month—March, June, September, December)... | 2½ |
| News items not less than 20 during the year | 2½ |
| Poem—Original | 2½ |
| Picture—with cut or money to pay for cut | 2½ |
| Story | 2 |
| Feature—New or on any regularly carried subject. (Tuberculosis, Cancer Control, Child, etc.) | 2½ |
| Advertising contracts secured for each dollar | 2½ |
| 21. Exhibit of Year Book and History of County Auxiliary at State Annual Meeting | 2½ |
| 22. Clippings of publicity brought to State Annual Meeting in Scrap Book or mounted on cardboard for exhibit | 2½ |
| 23. Historical Collection:
Items, clippings, pictures, etc., sent to Mrs. C. C. Howard, Glasgow, Chairman, or to Miss Louise Morel, 620 So. Third St., Louisville | 2½ |
| 24. Each Member attending State Annual Meeting | 5 |

PAST PRESIDENT'S MESSAGE

(Continued from Page 111)

ing healthy contacts between the public and the medical profession.

In the years to come may we ever be faithful to the Profession for which our husbands are sacrificing their lives.

With three new Auxiliaries added to our list to help us carry on this health education Project, I am expecting you to cooperate in every way with our new President, Mrs. R. T. Layman and be just as loyal to her as you have been to me.

CONSTITUTION AND BY-LAWS
of the
WOMAN'S AUXILIARY, KENTUCKY STATE
MEDICAL ASSOCIATION

CONSTITUTION

Article 1—Name

The name of this organization shall be the Woman's Auxiliary to the Kentucky State Medical Association.

Article 2—Object

The object of the Auxiliary shall be to extend the aims of the medical profession, through the women members of families of physicians to other organizations which look to advancement in health and education; to assist in entertainment in State, District and County Society meetings; to promote acquaintanceship among doctors' families, that local unity and harmony may be increased.

Article 3—Membership

(a) The membership of the Woman's Auxiliary to the Kentucky State Medical Association shall be composed of the membership of the Woman's Auxiliary to the County Medical Societies.

(b) The wives of members of County Medical Societies living in districts where there are no Auxiliaries may be invited to affiliate with the nearest County Auxiliary; or they may, as Members of the State at Large, send

dues, One Dollar annually, to the State Secretary.

Article 4—Officers

The officers of this Auxiliary shall be a President, a President-Elect, four Vice-Presidents, a Secretary, a Treasurer, and a Parliamentarian. (A Corresponding Secretary may be appointed by the President.)

Article 5—Executive and Advisory Boards

(a) These officers, together with the County Presidents and the Chairmen of State committees and the last three Past-Presidents of the State Auxiliary shall constitute an Executive Board to conduct the business of this Auxiliary.

(b) A regular meeting of the Board shall be held immediately before and after each annual meeting of the organization. Special meetings may be called by the President, or may be called upon written request of seven members of the Board.

(c) Four members of the Board shall constitute a quorum.

(d) The Executive Board shall have all power and authority over the affairs of the organization during the interim between its meetings, excepting that of modifying any action taken by the organization, and provided that no debt or liability, except for current expenses, shall be incurred by the Board. The Board is authorized to transact business by mail if necessary.



Article 6—Elections

(a) All officers shall be elected by ballot.

(b) The term of office of the Officers, with the exception of the President-Elect, shall begin at the close of the Annual Meeting at which they are elected. The term of office of the President-Elect shall begin at the close of the next Annual Meeting following the meeting at which she was elected. All officers serve one year, except the Secretary and the Treasurer who may be re-elected.

(c) All officers should be present at the meeting at which they are elected.

(d) A nominating committee shall be elected by the Executive Board to present a list of officers and representatives at the annual meeting; this committee to be composed of five members, not more than two of whom may be members of the Executive Board.

Article 7—Meetings

The meetings of the Woman's Auxiliary shall be held at the same time and place as the meetings of the State Medical Association. All members of County Auxiliaries have the privilege of attending the general meetings, but only accredited delegates may vote in the business of the meeting.

Article 8—Delegates

Each County Auxiliary shall be entitled to send its president and her alternate and one delegate and her alternate to each meeting. These accredited delegates with the members of the Executive Board from the voting body.

Twelve voting members shall constitute a quorum at any meeting of the organization, five of which shall be members of the Executive Board.

Article 9—Dues

(a) Each County Auxiliary shall pay annually dues to the State Auxiliary at the rate of fifty cents per capita; this to include the dues of twenty-five cents per capita to the Woman's Auxiliary, American Medical Association. The dues, payable January 1st, should be sent to the National Treasurer by the State Treasurer.

(b) Members of the State-at-Large shall pay their dues at the Annual Meeting or send them to the State Treasurer at that time.

(c) A newly formed County Auxiliary shall pay an initiation fee of \$2.00 in order to obtain representation at its first State Meeting. Thereafter, it shall pay its full membership dues at the rate of fifty cents per member to the State Treasurer at the end of the County Fiscal Year, as herein before provided.

Article 10—Amendments

This Constitution may be amended at any regular meeting of the Auxiliary, provided written notice has been sent each County

Auxiliary, not less than two months prior to said meeting.

Article 11—Parliamentary Authority

The rules contained in Cromwell's Compendium of Parliamentary Law shall govern this organization in all cases to which they are applicable, and in which they are not inconsistent with this Constitution and By-Laws.

BY-LAWS**Duties of Officers**

The duties of the President, Vice-Presidents, Secretary and Treasurer shall be those which usually devolve upon such officers.

The duty of the First Vice-President shall be to act as chairman of organization.

2—Committees

The President and Executive Board shall have power to create such committees as become necessary to promote the welfare of the Auxiliary, providing, insofar as practicable, committees to correspond with the national standing committees.

3—Meetings

All meetings of the Auxiliary and the Executive Board shall be conducted according to the regular order of business and parliamentary laws which usually govern such meetings.

4—Quorum

Four members of the Executive Board shall constitute a quorum.

5—Amendments

These By-Laws may be amended at any meeting of the Executive Board or at the Annual Meeting of the Auxiliary by a two-thirds vote of the members present, provided such amendments do not conflict with the spirit of the Constitution.

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AN ODE TO CITY STREETS

One objective of the Sampson Community Hospital Auxiliary, during the past year, is the elimination of tobacco spitting around the House Square and on the streets.

This bit of satire is dedicated to Mrs. Clifton Richards, President of the Woman's Auxiliary to the Medical Society of the Sampson Community Hospital in 1938-1939. Her efforts have been devoted, untiringly, to this project. I extend apologies to the immortal composer of "A Psalm Of Life."

Mrs. C. C. Howard, Glasgow

Tell me not in gleeful story

To spit on streets in not tabooed

For the man is dead—in glory;—

Since germs came here, unwooded.

Germs are here, germs are there.

Tho' the street is no spittoon.

We are patient—we are fair—

Streets must be no big lagoon.

A "fine" imposed will but remind

The carefree man who chews and spits
To save his "dough"—thus, ease his mind.

He must refrain from showy spits.

The man who coughs and spits at will

His friends will lose for aye,

For Flu and TB graves they'll fill

While spitting leads the way

The lady tourists in our towns

Slip on their mackintoshes

To seem not dumb they save their gowns.

They also don their gay galoshes.

In our town's great scene of trouble

Through the challenge of our few

May our grave effort be no bubble

But a dream of life come true.

Consternation, mixed with hope,

Fills our rainbow tinted dreams

That spitting days must soon elope

So morn will find clean walks and streams

Great precaution, sincere trust

In our efforts, night and day

This our motto—"We are just—

No more spitting any day."

The law we'll honor and obey.

If spitting always spreads disease,

Then ring headquarters and report

When thoughtless man has spat at ease.

Let us then be up and doing

With courage to combat all fate,

Still accomplishing, still pursuing

Let us labor and not wait.



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**Proceedings of the
SEVENTEENTH ANNUAL MEETING OF
THE WOMAN'S AUXILIARY
to the
KENTUCKY STATE MEDICAL ASSOCIATION
Held at**

Bowling Green, Ky., September 11-14, 1939

The Seventeenth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association opened at 9:00 A. M., Monday, September 11, 1939 at West Hall, Western State Teachers College, Bowling Green, Kentucky, with registration.

Quarterly Luncheon

The First Quarterly Luncheon of the Woman's Auxiliary to the Kentucky State Medical Association was held at Potter Hall at 12:00 M., with Mrs. A. T. McCormack, Editor of the Quarterly, presiding.

Thirty-seven were present but due to illness, neither the Business Manager, Mrs. Wm. H. Emrich, nor the Advertising Manager, Mrs. Jos. E. Wier, were able to attend.

Greetings and messages of encouragement were brought by two members of the Advisory Council, Dr. V. A. Stilley, Benton, and Dr.

A. T. McCormack, Louisville. Mrs. Samuel H. Flowers, Middlesboro, in the absence of the Advertising Manager, told of the method of financing the Quarterly. A Professor Quiz Program followed with Mrs. Eleanor Hume Offutt, Frankfort, acting as Professor Quiz, asking the questions, all of which were on the contents of the Quarterly. After a hotly-contested session, Mrs. John G. South, Frankfort, announced for the judges that Mrs. Samuel H. Flowers and Mrs. Joseph Barr, Frankfort, tied with the highest number of questions answered correctly. Mrs. Barr won the draw and received a beautiful corsage as a prize. The tables were beautifully decorated with flowers by the Warren County Auxiliary. At each plate were individual favors of daintily wrapped crackers from the Hampton Cracker Company and two types of note books supplied by the Stoll Oil Company and the Mayes Printing Company, Advertisers in the Quarterly.

Study Class

At 2:00 P. M., Monday, the Study Class was held in West Hall with Mrs. Samuel H. Flowers, presiding. 25 were present. Mrs. Flowers brought an inspiring message on the possibilities and scope of Public Relations work in the Auxiliary. She then presented Dr. John R. Pate, Director of Venereal Disease Control,

Kentucky State Board of Health, who spoke on syphilis, suggesting what the doctor's wife can do to further the benefits of the Pre-Marital Health Examination Law which becomes effective March 1, 1940.

A lecture on the proper diet for school children was given by Mrs. George Bradley, Elizabethtown. She displayed two little pasteboard houses, decorated, one with green vegetables, and the other with the proper kinds of candy which might be used as Exhibits to inspire school children to eat more vegetables and less candy, or at least less harmful types of candy. Mrs. E. H. Heller, Louisville, Commander of the Kentucky Unit of the Woman's Field Army for the Control of Cancer, spoke on Cooperation of Woman's Groups and Physicians in the Control of Cancer.

**MINUTES OF THE PRE-CONVENTION
BOARD MEETING**

The Annual Pre-Convention Board Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was held in West Hall, Western State Teachers College, Bowling Green, at 3:45 P. M. Monday, September 11, 1939, with Mrs. Harlan V. Usher, the President, of Sedalia, presiding. A quorum was present. (19 seated).

The invocation was offered by Mrs. R. T. Layman, Elizabethtown.

A motion carried that the reading of the minutes of the Mid-Year Board Meeting, held in Louisville, January 19, 1939, be dispensed with as they had been published in the Woman's Auxiliary Section of the Kentucky Medical Journal for April, 1939.

Roll call was answered by 18 members.

The Nominating Committee was elected as follows:

Mrs. S. C. McCoy, Louisville, Jefferson County, Chairman.

Mrs. Wallace M. Chapman, Harrodsburg, Mercer County.

Mrs. Garnett Bale, Elizabethtown, Hardin County.

Mrs. Norval Green, Calvert City, Marshall County.

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Mrs. C. C. Howard, Glasgow, Sampson Community.

The Resolutions Committee was appointed by the President, with Mrs. J. W. Sams, Louisville, Jefferson County, Chairman, assisted by Mrs. Joseph Barr, Frankfort, Franklin County and Mrs. Bernard Asman, Louisville, Jefferson County.

Need for elimination of superfluous clauses in the Constitution and By-laws concerning payment of dues, no longer required by the Southern Medical Auxiliary, was brought before the Board by Mrs. A. T. McCormack who moved that, with the approval of this Executive Board and The Advisory Council, the Parliamentarian bring the necessary amendment before the main body at the business meeting. Seconded by Mrs. Samuel H. Flowers, the motion carried.

Several Committee Reports were made in brief. Mrs. A. T. McCormack reported that models of the Jane Todd Crawford Home had been made by the Statewide Museum Project, W. P. A., and that she wished to distribute them for educational work in schools throughout the State and moved that the Treasurer pay this bill when presented from the Jane Todd Crawford Fund. The Treasurer, Mrs. Luther Bach, Bellevue, reported a balance of \$48.02 in the Jane Todd Crawford fund and asked what disposal should be made of any balance left over. Mrs. Samuel H. Flowers moved that the fund be kept open until all expenses be paid. This was seconded by Mrs. J. W. Sams. Mrs. McCormack then withdrew her motion and Mrs. Flowers' motion carried. Then Mrs. McCormack restated her motion which was seconded by Mrs. J. R. Shacklette, and it carried.

The Secretary reported that the suggestions for a Handbook were not complete. Mrs. Samuel H. Flowers made a motion that renewed effort to complete it be made and an Editing Committee, appointed by the President, present it at the Mid-Year Board Meeting; seconded by Mrs. J. R. Shacklette, carried. The President appointed Miss Grace Stroud, Mrs. A. T. McCormack and Mrs. S. C. McCoy, all of Louisville, on the Editing Committee.

Adjourned, 4:30 P. M.

GRACE STROUD, Recording Secretary

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PRESIDENT'S REPORT TO KENTUCKY STATE MEDICAL ASSOCIATION

The President, Mrs. Harlan V. Usher, appeared before the House of Delegates in Annual Session at the Western State Teachers College, Bowling Green, on Monday, September 11, 1939, at 8 P. M., and presented her report of the work of the Auxiliary for the past year.

JOINT SESSION

Tuesday, September 12, 1939, at 9:00 A. M. the Woman's Auxiliary met jointly with the Kentucky State Medical Association for the Installation Ceremony of the President, Dr. John W. Scott, Lexington.

MINUTES OF THE ANNUAL MEETING

First Session

The General Business Meeting of the Seventeenth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was called to order in Bowling Green in West Hall, Western State Teachers College, at 9:45 A. M., September 12, 1939, by the President, Mrs. Harlan V. Usher. A quorum was present. (39 members were seated at the opening of the session.)

The singing of America was led by Mrs. E. L. Williams, Bowling Green.

The Invocation was offered by Dr. A. B. Houze, First Christian Church, Bowling Green.

A solo, The Lord is My Shepherd, was sung by Mrs. E. L. Williams, Bowling Green.

The Address of Welcome was given by Mrs. L. O. Toomey, Bowling Green.

The Response was made by Mrs. George Bradley, Elizabethtown.

Messages and Greetings from the Kentucky State Medical Association were brought by the newly installed President, John W. Scott, M. D., Lexington, and a member of the Advisory Council, A. T. McCormack, M. D., Louisville.

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Roll Call showed 7 Officers, 4 Committee Chairman, 6 County Presidents and 18 Delegates present.

The Report of the Committee on Arrangements was made by Mrs. George M. Wells, Bowling Green.

The Report of the Committee on Credentials and Registration was given by Mrs. R. T. Layman, who announced 71 members registered.

A motion carried that the reading of the Minutes of the Sixteenth Annual Meeting held in Louisville, October, 3-6, 1938, be dispensed with as these Minutes had been published in the Woman's Auxiliary Section of the Kentucky Medical Journal for 1939.

The President delivered her Report of the Administrative Office, with the First Vice-President, Mrs. John M. Blades, Butler, in the Chair. The Report was adopted, with a rising vote of thanks, upon motion made by Mrs. A. T. McCormack, seconded by Mrs. J. R. Shacklette.

Reports of the following County Auxiliaries were made by the respective President or Delegate:

Campbell-Kenton, Franklin, Graves, Hardin, Jefferson, Madison, Licking Valley, Warren.

Upon motion of Mrs. Bernard Asman, Louisville, seconded by Mrs. R. T. Layman, these Reports were received and filed. All Reports presented in writing will be published in the Quarterly.

An impressive Memorial Service was led by Mrs. H. V. Usher, assisted by Mrs. A. T. McCormack; Mrs. P. E. Blackerby, Louisville, and Mrs. S. J. Martin, Bowling Green, each of whom reported with regret the loss of the following members:

Mrs. Graham Lawrence, Shelbyville, First State Auxiliary President.

Mrs. L. Lyne Smith, Louisville, Past President, Jefferson County Auxiliary.

Mrs. John B. Robards, Harrodsburg, Past President, Mercer County Auxiliary.

Mrs. G. E. Townsend, Bowling Green.

Recess.

INFORMAL LUNCHEON

An informal luncheon was given at 12:30 P. M., Tuesday, at Potter Hall, Bowling Green. The President, Mrs. Harlan V. Usher, presented Dr. A. T. McCormack who represented the Advisory Council. The Program Chairman, Mrs. R. T. Layman, then presented the guest speaker, Dr. A. D. Willmoth, Louisville, who gave a very thought-provoking address entitled, Woman—Her Sphere in the Professional and Business World Today.

TEA

Mrs. John H. Blackburn entertained with a delightful tea at her home in Bowling Green from 3:00 to 5:00 P. M. Tuesday. In the receiving line with Mrs. Blackburn, were the President, Mrs. Harlan V. Usher, the President-Elect, Mrs. R. T. Layman, the wife of the retiring President of the Kentucky State Medical Association, Mrs. William E. Gardner, Louisville, and Mrs. G. M. Wells, President, Warren County Medical Auxiliary. Assisting Mrs. Blackburn were the members of the Warren County Auxiliary.

MINUTES OF THE ANNUAL MEETING

Second Session

The Second Session of the General Business Meeting of the Seventeenth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was held in West Hall, Western State Teachers College, Bowling Green, at 9:00 A. M., Wednesday, September 13. The President, Mrs. Harlan V. Usher, presiding. A quorum was present. (23 members were seated at the beginning of the session.)

The Minutes of the previous session were read and approved.

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Reports of State Officers and Committee Chairmen were read, accepted and filed, as follows:

President-Elect, Mrs. R. T. Layman, Elizabethtown.

First Vice-President, Mrs. John M. Blades.

Treasurer, Mrs. Luther Bach, Bellevue. A motion that the Treasurer's Report, together with the Report of the Auditor, be adopted, was made by Mrs. A. T. McCormack and seconded by Mrs. E. B. Houston, Murray. The Treasurer then announced that there were not sufficient funds in the Treasury to allow the President's Discretionary Fund of \$100.00 as was done during the year 1938-39. After considering discussion a motion was made by Mrs. A. T. McCormack, seconded by Mrs. John M. Blades, that the Chair appoint a Committee to consider the financial affairs of the Auxiliary and report at the Post-Convention Board Meeting. Motion carried. The President appointed Mrs. A. T. McCormack, Mrs. S. C. McCoy and Mrs. J. W. Sams.

Doctor's Shop, read by Mrs. P. E. Blackerby in absence of Chairman, Mrs. J. B. Lukins, Historian, Mrs. V. A. Stilley, read by Secretary.

Hygeia, Mrs C. C. Turner, Glasgow.

Jane Todd Crawford, Mrs. A. T. McCormack. Mrs. McCormack moved that the body approve the paying of the bill for models of the Jane Todd Crawford Home which are to be placed in schools in every county of Kentucky. Mrs. J. R. Shacklette, seconded the motion and it carried.

Organization, Mrs. John M. Blades.

Program, Mrs. S. C. McCoy, Chairman, read by the Secretary. The Blue Ribbon for the largest number of credits in the County Achievement Project Contest was won by Hardin County with 157 1-2 points.

Public Relations, Mrs. Jos. E. Wier, Chairman, Read by Secretary.

Radio, Mrs. S. H. Flowers, Chairman, Read by Secretary.

Tuberculosis, Mrs. L. E. Smith, Chairman, Read by Secretary.

Editor, The Quarterly, Mrs. A. T. McCormack.

Business Manager, The Quarterly, Mrs. Wm. H. Enrich, Read by Mrs. A. T. McCormack.

Advertising Manager, The Quarterly, Mrs. Jos. E. Wier, Read by Mrs. A. T. McCormack.

The Report of the Sampson Community Hospital District was given by Mrs. Clifton Richards, Glasgow, who was unable to attend the opening session when the other County Reports were read. A motion by Mrs. A. T. McCormack, seconded by Mrs. Joseph Barr, that the report be accepted with thanks, carried.

The Report of the Delegate, Mrs. Jos. E. Wier, to the Annual Meeting of the Woman's Auxiliary to the American Medical Association, held in St. Louis, was read by the Secretary in the absence of the Delegate. Accepted and filed.

The Report of the Councilor to the Woman's Auxiliary to the Southern Medical Association, held in Oklahoma City, Oklahoma, was presented by Mrs. John M. Blades. Accepted and filed.

The President announced that a change in the Constitution and By-Laws of the Woman's Auxiliary to the Southern Medical Association had made a change in our own Constitution and By-Laws necessary. She explained that this change had been approved by the Pre-Convention Board Meeting. Whereupon, Mrs. J. R. Shacklette, Parliamentarian, moved that the superfluous clauses regarding payment of dues to the Southern Medical Auxiliary be stricken out, since dues are no longer collected from the States by the Southern Auxiliary. These words are (Article 9, Section A)—"and the dues of one dollar per County organization to the Woman's Auxiliary, Southern Medical Association." Also—"and to the Southern Auxiliary Treasurer." Then Section A will read "Each County Auxiliary shall pay annually dues to the State Auxiliary at the rate of fifty cents per capita; this to include twenty five cents per capita to the Woman's Auxiliary, American Medical Association. The dues, payable January 1, should be sent to the National Auxiliary Treasurer by the State

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Treasurer." Motion seconded by Mrs. Bernard Asman, carried.

Telegrams of best wishes for a successful meeting were received from Mrs. Charles P. Corn, President-Elect, Southern Medical Auxiliary; Mrs. V. A. Stilley, Historian, and Mrs. Joseph E. Wier, Public Relations Chairman.

The report of the Resolutions Committee was presented by Mrs. J. W. Sams, Chairman, as follows:

RESOLUTIONS

WHEREAS, The Seventeenth Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association will soon have completed a very successful and interesting meeting, and,

WHEREAS, The Warren County Medical Society and Woman's Auxiliary have so successfully worked and planned, together with the Kentucky State Medical Association, for our comfort and entertainment, and,

WHEREAS, The Western State Teachers College has attended to our needs and wants with courtesy and dispatch, and,

WHEREAS, The Press, especially the Times-Journal and the Park City Daily News of Bowling Green and the Louisville Courier-Journal have been most generous in using photographs of our officers and guests and publishing accounts of our activities, and,

WHEREAS, Reverend A. B. Houze, Dr. John R. Pate, Dr. A. D. Wilmoth, Mrs. E. H. Heller and Mrs. E. L. Williams gave their valuable time to appear on our program, NOW THEREFORE

BE IT RESOLVED, That we hereby gratefully express our sincere appreciation for all these courtesies extended to us at this meeting and that we join with Dr. Blackburn, when he says, there is no other place in Kentucky with such a wonderful hill on which to hold our Annual Meetings, and we do hope very much that the Woman's Auxiliary of Warren County will continue to work and that we may have an opportunity to have more meetings on this very hill.

WHEREAS, Our President, Mrs. H. V. Usher, has worked unselfishly to promote

greater efficiency, growth and development of our Auxiliary, And,

WHEREAS, The Officers have cooperated in a most helpful and satisfactory manner, NOW THEREFORE,

BE IT RESOLVED, That we now express our appreciation to Mrs. Usher and the other officers for their valuable services during the past year.

WHEREAS, The State Highway Department of Kentucky has aided in the development and beautification of the Jane Todd Crawford Trail during the past year, furnishing and placing suitable markers, preparing planting ground and planting bulbs, seeds and plants, carefully cutting weeds along the Trail, NOW THEREFORE,

BE IT RESOLVED, That a letter of thanks and appreciation be written to the Commissioner, Honorable Robert O. Humphrey, with special commendation for the kindly and effective helpfulness of the Highway Maintenance Crew in Marion County, Mr. Ivy Scott, Foreman, and, FURTHER,

BE IT RESOLVED, That we express to the Commissioner our hope that each of the other County Maintenance Crews located on the Jane Todd Crawford Trail—in Green, Taylor and Boyle Counties—will give cooperation in marking, planting and caring for planted areas, in order that the Trail may become a worthy memorial for our Pioneer Heroine.

WHEREAS, The House of Delegates, expressing the confidence of the Kentucky State Medical Association in its subsidiary organization—The Woman's Auxiliary—has again appropriated the sum of \$500.00 to be used, should occasion arise, as a Contingent Fund for the support of the Woman's Auxiliary Supplement to the Kentucky Medical Journal, known as the Quarterly, NOW THEREFORE,

BE IT RESOLVED, That we express to them our gratitude and indebtedness for this generous consideration and encouragement.

Respectfully submitted

Mrs. J. W. Sams, Chairman

Mrs. Joseph Barr

Mrs. Bernard Asman

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Motion by Mrs. R. T. Laymen, seconded by Mrs. George Bradley that the Resolutions be adopted, carried.

The Final Report of the Chairman of Registration and Credentials was given by Mrs. R. T. Layman and showed an attendance of 19 Delegates, 12 Officers and Committee Chairmen, 48 Members, making a grand total of 79 representing 25 Counties.

The Report of the Nominating Committee was presented by the Chairman, Mrs. S. C. McCoy, who with Mrs. C. C. Howard, worked with appointees—Mrs. P. E. Blackerby, Mrs. J. W. Sams, Mrs. H. C. White—due to the absence of the three other electives. Mrs. McCoy moved election of the candidates; seconded by Mrs. P. E. Blackerby, Nominations from the floor were called for. None were offered.

Motion carried that the nominations be closed and the Secretary cast the ballot, whereupon the following were declared elected:

President-Elect—Mrs. John M. Blades, Butler, Pendleton County.

1st Vice-President—Mrs. John E. Dawson, Fort Thomas, Campbell County.

2nd Vice-President—Mrs. George M. Wells, Bowling Green, Warren County.

3rd Vice-President—Mrs. John B. Floyd, Richmond, Madison County.

4th Vice-President—Mrs. Joseph Barr, Frankfort, Franklin County.

Recording Secretary—Miss Grace Stroud, Louisville, Jefferson County.

Treasurer—Mrs. Luther Bach, Bellevue, Campbell County.

Parliamentarian—Mrs. John G. South, Frankfort, Franklin County.

The newly elected officers were called to the platform and introduced by the President, forming a guard of honor as Mrs. R. T. Layman, the Incoming President, was installed by Mrs. A. T. McCormack and presented the gavel by Mrs. Harlan V. Usher. Following her Acceptance Address, Mrs. Layman announced that her Corresponding Secretary will be Mrs. George Bradley, Elizabethtown. Mrs. Layman appointed Mrs. P. E. Blackerby, Mrs. A. T. McCormack and Mrs. J. W. Sams to approve the Minutes of the Second Session. Adjourned sine die at 11:30 A. M.

GRACE STROUD, Recording Secretary

ANNUAL LUNCHEON

The Annual Luncheon was held at the Helm Hotel at 1:00 P. M. on Wednesday. This luncheon was given the members of the Auxiliary with the compliments of the Kentucky State Medical Association with Dr. William E. Gardner, Retiring President and Dr. John W. Scott, President of the Kentucky State Medical Association, as hosts. Dr. Van A. Stilley represented the Advisory Council. The President of the Woman's Auxiliary to the American Medical Association, Mrs. Rollo K. Packard, Chicago, Illinois, was the Honor Guest. In her address, Mrs. Packard told of the accomplishments of the American Medical Association as well as the Woman's Auxiliary and stressed the need of greater activity in public relations and health education.

Mrs. H. V. Usher, Retiring President, was Toastmistress.

POST-CONVENTION BOARD MEETING

The Post-Convention Board Meeting of the Woman's Auxiliary to the Kentucky State Medical Association was held in West Hall, at 3:15 P. M., Wednesday, with the President, Mrs. R. T. Layman, presiding. A quorum was present (27 were seated), including Mrs. Rollo K. Packard, President A. M. A. Auxiliary.

Invocation was offered by Mrs. H. V. Usher.

The President read her appointments of Committee Chairmen whereupon Mrs. Joseph Barr moved their approval. This motion was seconded by Mrs. John B. Floyd, Richmond, and carried.

The program of work for the coming year was presented by the President as a continuance of the Achievement Project for County Auxiliary Development. Following discussion, a motion by Mrs. J. W. Sams, seconded by Mrs. Bernard Asman, that a copy of the project be mailed to each County President, carried.

Mrs. A. T. McCormack, Chairman of the Committee to consider Ways and Means of paying the President's Discretionary Fund, reported that the Committee had met and advised the payment of half of the allotted amount (\$50.00) at the present time and expressed the hope that a way might be found to pay the balance later. The Committee will continue its investigation and report at the Mid-Year Board Meeting. A Motion by Mrs. H. V. Usher, seconded by Mrs. George Bradley, that the report be accepted, carried.

Several Committee Chairman spoke of their plans for the coming year. The Historian, Mrs. C. C. Howard, Glasgow, asked the cooperation of every member in her endeavor to obtain biographies of Kentucky Physicians.

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The Hygeia Chairman, Mrs. J. W. Sams, and the Tuberculosis Chairman, Mrs. L. E. Smith, Louisville, asked the cooperation of each County unit. In connection with the Tuberculosis work the great need of the patients at Hazelwood State Tuberculosis Sanatorium was explained and Mrs. H. V. Usher moved that each County Auxiliary attempt to send a Christmas Box to Hazelwood Sanatorium, as well as to the Frontier Nursing Service, as a new project for this year. The motion was seconded by Mrs. John M. Blades and carried.

Many methods for the placing of the Jane Todd Crawford Home models in County Schools and the distribution of the story of the Pioneer Heroine were discussed.

A motion by Mrs. P. E. Blackerby, seconded by Mrs. Luther Bach, that the Secretary write letters of regret because of their inability to attend the Annual Meeting to Mrs. V. A. Stilley, Benton; Mrs. Wm. H. Emrich, Louisville; Mrs. Joseph E. Wier, Louisville, and Mrs. J. I. Greenwell, New Haven, carried.

Adjourned 4:15 P. M.

GRACE STROUD, Recording Secretary

MRS. USHER HANDS OVER GAVEL

The time has now come in this Program to witness the Installation of the Officers to the Offices to which they have been elected.

Mrs. Layman, the Members of this body have chosen you as their leader, with confidence, believing that you are the one best fitted to this office this year and have signified their willingness to uphold your hands while you serve.

I turn over to you this gavel and pin over your heart this Badge of distinction representing the honor that is now yours, Madam President, and with it goes my sincere and best wishes for a happy and successful year.

PRESIDENT'S INAUGURAL ADDRESS

Mrs. R. T. Layman, Elizabethtown

Mrs. Usher, as you retire from this office, permit me to congratulate you on your excellent work and wish you the best in whatever field your labors may lead you. I also wish to thank you for your help and advice to me as President-Elect.

To the officers and members of the Woman's Auxiliary of the Kentucky Medical Society:

You have conferred on me the highest honor that can be given to a Member of the Auxiliary and I wish to assure you that I appreciate the honor and privilege of serving you as your President during the ensuing

year. I feel my inefficiency and am sure there are others who could serve you much better than I.

As I accept this honor and assume this responsibility, I promise to endeavor to do my duty judiciously. I earnestly solicit the active cooperation of every Member of the Auxiliary. The President and Officers can not carry the load alone, but it will take the united team work of every person in our organization to make it a success.

Just now the onward and upward movement of womankind is making a more zealous effort and each organization for men has its accompanying organization for wives, mothers, sisters and daughters. In all worthwhile clubs there are doctors' wives who have an opportunity to promote public health education. Such outstanding figures as Joan of Arc and Florence Nightingale merely symbolize the women of today who aspire and are eager to take part in the work of making the world a better place in which to live.

Many women have chosen the field of public health as the one best suited for their particular talents. We find women occupying important positions in health departments, laboratories, and public health nursing. All those who have attended meetings of Parent-Teacher Associations know that women are the ones who represent the parents. Practically all of the women's clubs of the country have their health committees which are more or less actively engaged in public health work.

Compare yourself with your mother when she was your age, then think back to your grandmother when she was your age. Would you be that dear old lady sitting quietly by the fireside knitting? Not for a minute! We wish to be vitally on our way. In order to achieve results, we must be active and alert. Women are playing an important part in the business world of today. We are living in a different age and the golden gates of opportunity are opened to both sexes alike. Our

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being in the business world and working for the betterment of conditions does not mean that we must neglect the home, the most sacred spot on earth, the nucleus around which all true happiness centers. The influence of women in public life should be for good; we must be conservative and progressive. We must be up and doing in the great field ahead of us, and thus show the world that we are willing to do our part and ready to shoulder the responsibility of making the world a better and healthier place in which to live. The younger women must be better educated and equipped than the pioneers if they are to hold fast to that which has already been gained.

As an organization, let us gather our strength and employ it in promoting the issues for which our husbands toil; let us have for one of our objectives the restoration of the doctors' prestige enjoyed by them a century ago.

A GARDEN

Reba Burrow Flynn, Frankfort

God has walked with me through a lovely garden.

I saw his hand upon a daffodil;

I felt His very breath among the violets

'Long the pathway winding down the hill.

The blue larkspur had known His soft caress,
As did the blushing rosebuds claim His grace;

But there . . . beside the pool of purple lilies
. . . I saw His wond'rous face!

Only a humble prayer my heart could utter
That He should come and walk so close to me;

And I wondered, if perhaps He loved my garden

As one He loved . . . back in Gethsemane.

MEMBERS OF THE WOMAN'S AUXILIARY TO THE FRANKLIN COUNTY MEDICAL SOCIETY



In session at the home of Mrs. Joseph Barr, President of the organization. Seated, reading from left to right, are Mrs. R. M. Coblin, Mrs. John P. Stewart, Mrs. Barr, Mrs. Edward K. Martin, Mrs. Reba Burrow Flynn and Mrs. E. C. Roemele. Standing from left to right, Mrs. James Darnell, Mrs. A. R. Casey, Jr., Mrs. L. T. Minish, Mrs. Dowling Stewart, Mrs. M. C. Darnell, Mrs. L. L. Cull and Mrs. John G. South.

TO THE COUNCIL OF THE KENTUCKY STATE MEDICAL ASSOCIATION—WOMAN'S AUXILIARY

In connection with an examination of the records of The Kentucky State Medical Association for the period from September 1, 1938 to September 1, 1939, I followed customary procedure and examined the records of the Auxiliary Treasurer, Mrs. Luther Bach, and those of Mrs. William H. Emrich, Business Manager of the Auxiliary's publication, "The Quarterly".

Exhibits and statements submitted here with set forth in detail the financial transactions of the Auxiliary and "The Quarterly" as reflected by the records of the Treasurer and Business Manager.

Cash transactions for the period, as reflected by these statements, were verified to the extent that all recorded receipts were traced to amounts shown by bank statements on file, and all recorded disbursements paid by the bank were evidenced by officially signed canceled checks on file. Balances on deposit with banks were verified by direct communication with the depositaries.

I wish to express my appreciation of the courtesies and helpful assistance rendered by those in charge during the course of the examination.

Respectfully Submitted

P. WILLETT HAGAN,
Certified Public Accountant

**Accounts of
WOMAN'S AUXILIARY
to the
KENTUCKY STATE MEDICAL ASSOCIATION
EXHIBIT "A"**

RECEIPTS

Gross dues received -----	\$ 176.00
Less American Medical Association Auxiliary dues -----	72.75
State Dues Received -----	\$ 103.25
Initiation Fee—Lawrence County -----	2.00
Second Dividend 10% Paid—National Bank of Kentucky, Louisville, Kentucky -----	7.26
Transfer—J. N. McCormack Memorial Fund—checking account -----	50.50
Total Receipts for 1938-1939 -----	\$ 163.01

DISBURSEMENTS

Office Supplies, Postage and Badges -----	\$ 8.00
Printing and Stationery -----	16.20
President's Expense -----	108.53
Corresponding Secretary's Expense -----	2.60
Transfer to The Quarterly (Advertising Commission) -----	13.59
J. N. McCormack Memorial -----	50.50
Bank Service -----	.05
Total Disbursements -----	\$ 199.47

Cost over collections on 1938-1939 operations -----	\$ 36.46
Balance on hand August 1, 1938, Campbell County Bank, Bellevue, Kentucky -----	140.57

Balance on hand June 27, 1939, Campbell County Bank, Bellevue, Kentucky -----	\$ 104.11
---	-----------

SAVINGS ACCOUNT

Louisville Trust Company, Louisville, Refunding Certificate No. 14258 -----	\$ 46.67
Louisville Trust Company, Louisville, August 1, 1938, Savings Account Balance in name of Mrs. Luther Bach, Treasurer -----	\$ 64.45
Interest -----	\$.23
Less Government Tax -----	.06
	.17

Total Savings Account Deposited in Louisville Trust Company, Louisville, July 1, 1939 -----	64.62
Balance, July 1, 1939, Jane Todd Crawford Memorial Fund, held by Treasurer, Mrs. Luther Bach -----	37.02

Total Assets -----	\$ 252.42
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EXHIBIT "B"
JANE TODD CRAWFORD MEMORIAL FUND
1938-1939

Balance Forward, August 1, 1938	\$ 774.13
1938	
Aug. 18—Mrs. H. V. Usher, Sedalia	1.00
Aug. 18—Mrs. R. G. Ashley, Mayfield	1.00
Aug. 18—Mrs. W. J. Shelton, Mayfield	1.00
Sept. 13—Graves County Auxiliary	1.00
Aug. 29—Mrs. J. E. Edwards, Lancaster	1.00
Aug. 29—Mrs. E. B. Houston, Murray	1.00
Aug. 30—Mrs. Alfred D. Teare, Berlin, N. H.	1.00
Aug. 30—Mrs. Irving Teare, Berlin, N. H.	1.00
Aug. 30—Mrs. Frank E. Teare, Milan, N. H.	1.00
Aug. 30—Mrs. Harry Wheeler Berlin, N. H.	1.00
Aug. 30—Mrs. Russell Wiggin, Windham, Conn.	1.00
Aug. 30—Mrs. Joseph E. Wier, 1605 Chichester Ave., Louisville	1.00
Aug. 30—Mrs. Richard Godfrey, Lancaster	1.00
Aug. 30—Miss Edwina Edwards, Lancaster	1.00
Sept. 26—Mrs. C. P. Coogle, 1910 1/2 Robbins Place, Austin, Texas	5.00
Oct. 3—Mrs. Belle Brown Gardner, Elizabethtown, by son, Dr. W. E. Gardner	2.50
Oct. 3—Mrs. W. E. Gardner, Louisville	2.50
Oct. 3—Mrs. E. L. Henderson, Louisville	1.00
Oct. 3—Mrs. Henrietta Lewis Henderson, Louisville (by son, Dr. E. L. Henderson)	5.00
Oct. 3—Mrs. C. C. Howard, Glasgow	10.00
Oct. 3—Mrs. Virgil Kinnaird, Lancaster	5.00
Oct. 3—Mrs. Mary Glascock, Flemingsburg, by son, Dr. J. B. Lukins, Louisville	5.00
Oct. 3—Mrs. H. G. Reynolds, Paducah	5.00
Oct. 3—Mrs. V. A. Stilley, Benton	10.00
Oct. 3—Mrs. Charles A. Vance, Lexington	5.00
Oct. 8—Mrs. J. B. Lukins, Louisville	1.00
Oct. 8—Mrs. W. Burr Atkinson, Campbellsville	5.00
Oct. 12—Mrs. R. L. Durham, Greensburg	1.00
Oct. 12—Mrs. Geo. M. Barbee, Campbellsville	1.00
Oct. 12—Mrs. W. E. Coleman, Lebanon	1.00
Oct. 12—Mrs. H. G. Edwards, Campbellsville	1.00
Oct. 18—Mrs. H. C. White, Covington	1.00
Oct. 18—Mrs. J. M. Blades, Butler	1.00
Oct. 18—Mrs. J. E. Dawson, Ft. Thomas	1.00
Oct. 18—Miss Pauline C. Haley, Ft. Mitchell	1.00
Nov. 2—Mrs. L. Wallace Frank, Louisville	10.00
Nov. 2—Mrs. Loraine Merrifield, Louisville	1.00
Nov. 2—Mrs. Fred Haupt, Louisville	1.00
Nov. 2—Miss Bertha Denhardt, Bowling Green	1.00
Nov. 2—Miss Frances Isabella Clegg, Chicago, Ill.	1.00
Oct. 19—Mrs. R. Alexander Bate, Louisville	5.00
Oct. 19—Mrs. J. Norris Breed, Louisville	1.00
Oct. 19—Mrs. Bertha Brownstein, Louisville (by her son, Dr. S. J. Brownstein)	5.00
Oct. 19—Mrs. Samuel J. Brownstein, Louisville	1.00
Oct. 19—Mrs. Wm. Asa Onderdonk, Louisville	10.00
Oct. 19—Mrs. Carrie Bale Rowntree (by her son, Dr. Gracie Rowntree, Cave City)	5.00
Oct. 19—Mrs. Gracie Rowntree, Louisville	1.00
Oct. 19—Mrs. Leon L. Solomon, Louisville	2.00
Oct. 19—Mrs. Samuel Gayle Terry, Louisville	1.00
Nov. 3—Mrs. Irvin Abell, Louisville (by Irvin Abell, Jr.)	5.00
Nov. 3—Mrs. Philip Barbour, Louisville	10.00
Nov. 3—Mrs. Fred H. Crawford, Louisville	5.00
Nov. 3—Mrs. Morris Flexner, Louisville	5.00
Nov. 3—Mrs. Samuel H. Flowers, Louisville	1.00
Nov. 3—Mrs. Hart Hagan, Louisville	5.00
Nov. 3—Mrs. M. J. Henry, Louisville	5.00
Nov. 3—Mrs. J. Duffy Hancock, Louisville	5.00
Nov. 3—Mrs. Adolph O. Pfingst, Louisville	10.00
Nov. 3—Mrs. John C. Rogers, Louisville	1.00
Nov. 3—Mrs. B. Wilson Smock, Louisville	5.00
Nov. 3—Mrs. John D. Trawick, Louisville	5.00
Nov. 3—Mrs. E. W. Stokes, Louisville	10.00
Nov. 6—Mrs. C. Z. Aud, Louisville (by her son, Dr. Guy Aud)	15.00
Nov. 6—Mrs. Herbert W. Derway, Louisville	5.00

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Nov. 6—Mrs. Emil Theodore Grasser, Louisville	1.00
Nov. 6—Mrs. E. T. Grasser (for Mrs. E. D. Memory, Louisville)	1.00
Nov. 6—Mrs. Asa White Nickell, Louisville	5.00
Nov. 6—Mrs. R. A. Tate, Louisville	1.00
Nov. 6—Mrs. Hugh R. Leavell, Louisville	10.00
Nov. 6—Mrs. Blanch Blake, Louisville (by her brother, Dr. Chas. W. Hibbitt)	5.00
Nov. 6—Mrs. Misch, (Clara L.) Casper, Louisville	5.00
Nov. 6—Mrs. O. M. Crenshaw, Lebanon	1.00
Nov. 6—Mrs. Thos. Crice, Louisville	2.00
Nov. 12—Miss Hattie Davenport, Greensburg	1.00
Nov. 12—Mrs. Joseph F. Dusch	1.00
Nov. 12—Mrs. Margaret Barr Evans (by her son, Dr. R. M. Evans)	5.00
Nov. 12—Mrs. Louis Frank, Louisville	5.00
Nov. 12—Mrs. DeLon Hall, Louisville	5.00
Nov. 12—Mrs. E. H. Heller, Louisville	1.00
Nov. 12—Mrs. J. Henry (Birdella Megibben) Heuser, Louisville	5.00
Nov. 12—Mrs. Carl J. Johnson, Louisville	10.00
Nov. 12—Mrs. C. C. Maupin, Louisville	2.00
Nov. 12—Mrs. Oscar O. Miller, Louisville	5.00
Nov. 12—Mrs. L. E. Smith, Louisville	1.00
Nov. 12—Mrs. A. D. Willmoth, Louisville	10.00
Nov. 15—Mrs. E. A. Barnes, Albany	2.00

Receipts for Year	\$ 305.00
Dec. 31—Interest	7.89
Total Receipts for Year	\$ 312.89
Total Receipts	\$1,087.02
Less Disbursements to Jane Todd Crawford Memorial Committee of Southern Medical Auxiliary	\$1,050.00
Balance on hand, July 1, 1939, held by Treasurer, Mrs. Luther Bach, for Jane Todd Crawford Project in Kentucky	\$ 37.02

EXHIBIT "C"

JOSEPH N. McCORMACK MEMORIAL FUND

1937-1938-1939

RECEIPTS AND DISBURSEMENTS

1937	
Sept. 15—Dr. V. A. Stilley, Benton	\$ 10.00
Sept. 15—Dr. T. Atchison Frazier, Marion	10.00
Sept. 15—Dr. John W. Scott, Lexington	10.00
Sept. 15—Dr. Philip E. Blackerby, Louisville	10.00
Sept. 16—Dr. Charles A. Vance, Lexington	10.00
1938	
July 30—Mrs. E. A. Barnes, Albany	.50
Total Receipts	\$ 50.50
1938	
Oct. 23—Check No. 1—Kentucky State Medical Association to expense of dedication of J. N. McCormack Memorial	\$ 50.50
Balance agreeing with balance in Campbell County Bank, Bellevue, Kentucky	\$.00

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EXHIBIT "D"

PAID MEMBERSHIP TO AUGUST 1, 1939

	1935	1936	1937	1938--	1939
Ballard-Carlisle	10	--	5	--	--
Breathitt	--	--	--	17	13
Cadway	4	3	1	2	--
Campbell-Kenton	10	5	5	25	12
Franklin	--	--	4	20	21
Graves	14	15	17	--	35
Hardin	--	12	--	11	17
Jefferson	116	121	114	110	--
Lawrence	--	--	--	--	--
Madison	--	--	--	36	32
Marshall	6	--	--	6	8
McCracken	--	--	36	3	--
Mercer	--	17	16	--	12
Nelson	10	9	9	--	8
Perry	23	18	--	--	--
Licking Valley	--	--	--	--	23
Sampson Community Hospital	19	24	17	15	8
State at Large	23	15	21	8	26
Totals	235	239	245	253	215
300 Memberships (from County Auxiliary) @ \$.50					\$ 150.00
26 State at Large Memberships					26.00
Total Dues Collected					\$ 176.00

EXHIBIT "E"

Detailed Statement of Receipts and disbursements of Mrs. Luther Bach, Treasurer, Woman's Auxiliary, Kentucky State Medical Association, from August 1, 1938, to June 27, 1939.

	Receipts	Disbursements
Aug. 1—Balance Forward	\$ 140.57	
Aug. 29—Dues, Nelson County Auxiliary (1937), Mrs. C. B. Elston, Bardstown, Ky.		4.00
Aug. 18—Dues, Graves County Auxiliary (eleven for 1937 and five for 1938), Mrs. J. W. Shelton, Mayfield, Ky.		8.00
Sept. 13—Dues, Graves County (six members for 1938) Mrs. W. J. Shelton, Mayfield, Ky.		3.00
Sept. 6—Check No. 16 to Mrs. Wm. Emrich—Amount returned to account of Quarterly which was sent to me by mistake		13.59
Sept. 26—Dues, State at Large, Mrs. S. H. Flowers, E. Gray St., Louisville, Ky.		1.00
Sept. 22—Dues, Madison County Auxiliary		9.50
Oct. 3—Dues, Breathitt County Auxiliary, Miss Helen Hogg, Jackson, Ky.		6.50
Oct. 4—Dues, State at Large, Mrs. L. S. Hayes, Louisa, Ky. (Lawrence County)		1.00
Oct. 4—Dues, State at Large, Mrs. H. Gilbert Reynolds, 150 Broadway, Paducah, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. J. E. Johnson, Stone, Ky. (Pike County)		1.00
Oct. 4—Dues, State at Large, Miss Dorothy Collins, Hazard, Ky. (Perry County)		1.00
Oct. 4—Dues, State at Large, Mrs. Clark Bailey, Harlan, Ky. (Harlan County)		1.00
Oct. 4—Dues, State at Large, Mrs. Francis M. Price, Harrodsburg, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. H. T. Morris, Greenup, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. J. I. Greenwell, New Haven, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. M. C. Prichard, Catlettsburg, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. A. M. Lyon, 201 W. Main St., Louisa, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. Lottje Graves, Scottsville Ky		1.00
Oct. 4—Dues, State at Large, Mrs. J. Y. Barbee, Scottsville, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. O. E. Ferguson, Cloverport, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. E. L. Busby, Henderson, Ky.		1.00
Oct. 4—Dues, State at Large, Mrs. W. L. Stumbo, Lackey, Ky. (Floyd County)		1.00
Oct. 4—Dues, State at Large, Mrs. Walker Owens, Mt. Vernon, Ky. (Rockcastle County)		1.00
Oct. 8—Dues, State at Large, Mrs. W. Burr Atkinson, Campbellsburg Ky.		1.00
Oct. 17—Dues, in arrears (1937) Mrs. Peter Gunterman, 676 S. 40th St., Louisville, Ky.		50
Oct. 18—Check No. 17 to the Wachtel Company for badges to be used during 1938 meeting		7.00
Oct. 18—Check No. 18 to Mrs. Stephen C. McCoy for President's expenses		8.53
Oct. 18—Check No. 19 to Mrs. Chas. Moore for expenses of Corresponding Secretary		2.60
Oct. 19—Dues, State at Large, Mrs. Wm. Edward Ray, 1434 S. 1st St., Louisville, Ky.		1.00
Nov. 26—Dues, Madison County Auxiliary, Mrs. John Hunt Rutledge, Richmond, Ky.		3.50
1939		
Jan. 2—Initiation Fee, Lawrence County, Mrs. Eva V. Lyons, Louisa, Ky.		2.00
Jan. 9—Check No. 20, Times-Journal Publishing Co., Bowling, Green, Ky. (Stationery)		16.20
Jan. 11—Dues, Sampson Com. Hosp. Aux., Mrs. J. W. York, Canmer, Ky.		4.00
Jan. 17—Dues, Madison County Auxiliary, Mrs. John Hunt Rutledge, Richmond, Ky.		1.00
Feb. 17—Dues, State at Large, Mrs. G. S. Brock (1938-1939) London, Ky.		2.00
Feb. 27—Dues, State at Large, Mrs. C. P. Coogle, 1910 1/2 Robbin Place, Austin, Tex.		1.00
Mar. 9—Dues, Licking Valley Auxiliary, Mrs. W. R. Houston, Erlanger, Ky. (1938)		11.50
Mar. 10—Dues, Franklin County Auxiliary, Mrs. R. M. Coblin, Frankfort, Ky. (1939)		10.50
Mar. 10—Dues, Marshall County Auxiliary, Mrs. V. A. Stille, Benton, Ky.		3.00
Mar. 14—Check No. 21 to Mrs. Luther Bach for postage		1.00
Mar. 14—Dues, Hardin County Auxiliary, Eliza Lancaster, Elizabethtown, Ky.		8.50
Mar. 14—Dues, Mercer County Auxiliary, Mrs. Robt. T. Ballard, Harrodsburg, Ky.		6.00



SEMI-GLOSS PAINT
Produces a satin gloss finish on all interior walls and woodwork.

HY-KLAS

MERCHANTS & MANUFACTURER'S PAINT COMPANY
Louisville, Kentucky

Mar. 15—Check No. 22 to Mrs. E. E. Fisher, Multnomah County Hospital, Portland, Oregon (National Dues) -----		72.75
Mar. 20—Dues, State at Large, Mrs. E. B. Houston, Mrs. Hugh L. Houston, Mrs. Hal E. Houston, Murray, Ky. -----	3.00	
Mar. 28—Dues, Graves County Auxiliary, Mrs. J. M. Meyer, Mayfield, Ky. -----	6.00	
Mar. 30—Dues, Graves County Auxiliary for Mrs. M. W. Hunt, Mayfield, Ky. -----	.50	
Apr. 24—Dues, Jefferson County Auxiliary (1938) Mrs. H. Arch Herzer, Louisville, Ky., 110 Members -----	55.00	
Apr. 25—Dues, Marshall County Auxiliary, Mrs. Fern Green, Calvert City, Ky. (2 Members) --	1.00	
Apr. 28—Dues, Madison County Auxiliary, Mrs. John Hunt Rutledge, Richmond, Ky. -----	.50	
May 4—Dues, Madison County Auxiliary, Mrs. John Hunt Rutledge, Richmond, Ky. -----	1.50	
May 4—Dues, Campbell-Kenton Auxiliary, Mrs. H. C. White, Covington, Ky. -----	6.00	
Mar. 29—Check No. 23, Mrs. H. V. Usher, president's traveling expenses -----		100.00
Bank service charge on \$100.00 check -----		.05
June 22—Dues, State at Large, Mrs. R. L. Compton, Greenup, Ky. -----	1.00	
June 22—Second Dividend, National Bank of Kentucky -----	7.2c	
Transfer of Funds from Joseph N. McCormack Memorial Fund to cover Check No. 1 issued Oct. 23, 1938, to Kentucky State Medical Association, expense of dedication -----	50.50	50.50
Total Receipts -----	\$ 376.33	
Total Disbursements -----		\$272.22
Balance on hand, Campbell County Bank, Bellevue, Kentucky -----		104.11
	\$ 376.33	\$376.33

EXHIBIT "F"

Collections and Disbursements by Mrs. William H. Emrich, Business Manager, from August 1, 1938, to July 1, 1939, on account of "The Quarterly," Supplement to the Kentucky Medical Journal, corresponding with checks, deposits and receipts filed.

RECEIPTS

Receipts from Advertisers—August 1, 1938, to July 1, 1939:

Old Accounts Paid:

1937 Accounts -----	\$ 10.00
1938 Accounts -----	104.00

Total Collections Old Accounts ----- 114.00

1939 Accounts ----- 1,049.55

Total received from Advertisers ----- \$ 1,163.55

Kentucky State Medical Association 1937 ----- \$ 13.59

Kentucky State Medical Association 1938 ----- 17.95

31.54

Contributions ----- 16.43

Total Receipts 1938-1939 ----- \$ 1,211.52

DISBURSEMENTS

Expense of Quarterly ----- \$ 815.13

Commissions on advertisements paid Mrs. Jos. E.

Wier, Advertising Manager ----- 151.58

Bank Service and Tax ----- .50

Total Disbursements 1938-1939 ----- \$ 967.21

Collections over Cost on 1938-1939 ----- \$ 244.31

Balance in Liberty Bank and Trust Co., Louisville, beginning of period ----- 169.56

Balance, July 1, 1939 ----- \$ 413.87

Total Balance agreeing with Bank Balance as of

July 1, 1939, Liberty Bank and Trust Co.,

Louisville ----- \$ 434.29

Less Check No. 37, outstanding (to Cash for stamps and express) ----- 20.42

Net Balance ----- \$ 413.87

Kentucky State Medical Association—Commission

for advertisements (for deposit) ----- \$ 13.98

Receipts on 1939 Accounts Receivable held for

deposit ----- 41.25

Receipts on 1939 contributions held for deposit -- 5.00

Total amount on hand for deposit ----- \$ 60.23

Additional Receipts on 1939 (August) Accounts

for deposit ----- \$ 43.75

Total amount on hand for deposit ----- \$ 103.98

Accounts Receivable*

1939 Accounts ----- \$ 201.43

Total Assets ----- \$ 719.28

Liabilities

Accounts Payable -----

Net Worth ----- \$ 719.28

*Uncollectable accounts for 1935, 1936, 1937, amounting to \$55.75, charged off books.

Fine China, Glassware, Art Goods
Dolfinger China Co.
 Incorporated
 325 W. Walnut St., Starks Bldg.
 Louisville, Kentucky



EXHIBIT "G"
Contributions to
THE QUARTERLY

1938		
Aug. 25	Samson-Community Hospital Auxiliary	\$ 2.00
Nov. 4	Nelson County Auxiliary	8.43
Dec. 9	Mrs. A. A. Herold, Shreveport, Louisiana	1.00
1939		
Jan. 24	Mrs. C. P. Corn, Greenville, S. C.	1.00
Jan. 24	Mrs. F. Creagor, Indianapolis, Ind.	1.00
Jan. 24	Miss Pauline Haley, Va.	1.00
Jan. 24	Mrs. J. L. Jones, Salt Lake City, Utah	1.00
Jan. 24	Mrs. Sadie Coogle, Austin, Texas	1.00
Total Contributions August 1, 1938, to July 1, 1939		\$ 16.43

EXHIBIT "H"
THE QUARTERLY
Accounts Receivable

Firm (1939)	Agent	Account
Brown Employment Agency	Mrs. Jos. Wier	\$ 8.43
Cake Box	Mrs. Jos. Wier	10.00
Capitol Laundry	Mrs. Jos. Wier	10.00
Denhard, Brooks	Mrs. Wm. Emrich	20.00
Imorde, B. & W.	Mrs. Jos. Wier	11.25
Jaglowicz, Jos. A.	Mrs. A. T. McCormack	11.25
Kentucky Tent & Awning Co.	Mrs. Jos. Wier	20.00
Limper Jackson Pharmacy	Mrs. Jos. Wier	11.25
Mayes Printing Co.	Mrs. Jos. Wier	11.25
Meffert Equipment Co.	Mrs. Jos. Wier	11.25
Model Drug Co.	Mrs. Jos. Wier	11.25
Moongate Gift Shop	Mrs. Jos. Wier	5.25
Oehrle, Edw. Coal Co.	Mrs. S. C. McCoy	6.50
Powell Seed Co.	Mrs. Jos. Wier	5.00
Renee Dress Shop	Mrs. Jos. Wier	20.00
Stoll Oil Refining Co.	Mrs. Wm. Emrich	20.00
Times-Journal Publ. Co.	Mrs. Wm. Emrich	8.75
Total		\$ 201.43

HAMPTON'S

Crackers and Cookie Cakes

are
Always Fresh
Get them from your Grocer

Made by
**The Hampton Cracker Division of
Consolidated
Biscuit Company**

2900 Magazine Street,
LOUISVILLE, KENTUCKY

Lady Betty SALAD DRESSING

Made from the purest ingredients Lady Betty Salad Dressing adds just that final regal touch to those appetizing tasty salads that make their appearance at this season of the year. Have them more frequently.



WHEATLY MAYONNAISE CO.
Louisville - Jacksonville - Dallas

LOUISVILLE FIRE & MARINE INSURANCE COMPANY
SPEED BUILDING
LOUISVILLE, KY.
Doctors! Ask our agents about our Valued Automobile policy.

EXHIBIT "I"

Details of Advertisements

Advertisements from: September, 1938. to September, 1939.

Firm	Agent	Contract	Paid
Arctic Ice Co.	Wier, Mrs. Jos.	\$20.00	\$19.60
Bornwasser Cafe	Wier, Mrs. Jos.	20.00	20.00
Brown Employment Agency	Wier, Mrs. Jos.	11.25	2.82
Bush-Krebs Engravers	Wier, Mrs. Jos.	11.25	11.25
Baynham Shoe Co.	Wier, Mrs. Jos.	20.00	20.00
Butterman Ice Cream	Wier, Mrs. Jos.	35.00	35.00
Cake Box	Wier, Mrs. Jos.	20.00	10.00
Capitol Laundry	Wier, Mrs. Jos.	20.00	10.00
Cherokee Dairy	Emrich, Mrs. W. H.	11.25	11.25
Clara Hats	Wier, Mrs. Jos.	11.25	11.02
Clifty Falls	Wier, Mrs. Jos.	11.25	11.03
Cowherd, J. W., Grocers	McCormack, Mrs. A. T.	11.25	11.02
Cralle, Lee E.	Wier, Mrs. Jos.	35.00	34.80
Crown Laundry	Wier, Mrs. Jos.	20.00	19.60
Crutcher Dental Depot	Wier, Mrs. Jos.	11.25	11.25
Deckel, Chas.	Hendon, Mrs. G. A.	10.00	10.00
Denhard, Brooks	Emrich, Mrs. W. H.	20.00	
Dolfinger China Co.	Wier, Mrs. Jos.	11.25	11.25
Ewing Von-Allmen	McCormack, Mrs. A. T.	100.00	100.00
Emmart Packing Co.	Wier, Mrs. Jos.	15.00	15.00
Gilliland Laboratory	McCormack, Mrs. A. T.	100.00	100.00
Grocers Baking Co.	Wier, Mrs. Jos.	60.00	60.00
Geher & Sons	Emrich, Mrs. W. H.	11.25	11.25
Hampton Crackers	Wier, Mrs. Jos.	35.00	34.80
Hirsch Bros.	Wier, Mrs. Jos.	11.25	11.03
HY-KLAS Paint	Wier, Mrs. Jos.	20.00	20.00
Hulskamp Drug Co.	McCormack, Mrs. A. T.	11.25	11.03
Huston, W. P., Ins.	Wier, Mrs. Jos.	11.25	11.25
Imorde, B. & W.	Wier, Mrs. Jos.	11.25	
Jaglowicz, Jos. A.	McCormack, Mrs. A. T.	11.25	
Jefferson County Milk Co.	Wier, Mrs. Jos.	20.00	20.00
Ky. Book Mfg. Co.	McCormack, Mrs. A. T.	11.25	11.10
Ky. Dairies	Emrich, Mrs. W. H.	11.25	11.25
Ky. & Ind. R. R.	McCormack, Mrs. A. T.	60.00	58.80
Ky. Tent & Awning Co.	Wier, Mrs. Jos.	20.00	
Klein Bros. Locksmiths	Wier, Mrs. Jos.	11.25	11.25
Kroger Grocery Co.	Wier, Mrs. Jos.	35.00	35.00
Limper-Jackson Pharmacy	Wier, Mrs. Jos.	11.25	
Louisville Apothecary	Wier, Mrs. Jos.	11.25	11.25
Louisville Crematory	Wier, Mrs. Jos.	20.00	20.00
Louisville Chemical	Emrich, Mrs. W. H.	11.25	11.25
Louisville Fire and Marine Ins.	McCormack, Mrs. A. T.	11.25	11.02
Louisville Varnish Co.	Emrich, Mrs. W. H.	20.00	20.00
Marlbank Farm Milk	Wier, Mrs. Jos.	35.00	35.00
Mayes Printing Co.	Wier, Mrs. Jos.	11.25	
Medical Arts	Wier, Mrs. Jos.	11.25	11.25
Meffert Equipment	Wier, Mrs. Jos.	11.25	
Mimi's Beauty Shop	Wier, Mrs. Jos.	11.25	11.25
Minish & Potts, Florists	Wier, Mrs. Jos.	11.25	11.25
Model Drug Co.	Wier, Mrs. Jos.	11.25	
Moon Gate Gift Shop	Wier, Mrs. Jos.	11.25	6.00
Muldoon Monument Co.	Wier, Mrs. Jos.	11.25	11.25
Muth Optical Co.	Wier, Mrs. Jos.	11.25	11.25
Newman Drug Co.	Wier, Mrs. Jos.	20.00	20.00
Oehrie, Edw. Coke & Coal Co.	McCoy, Mrs. S. C.	6.50	
Premier Paper Co.	Wier, Mrs. Jos.	20.00	20.00
Porter Paint Co.	Wier, Mrs. Jos.	20.00	20.00
Powell Seed Co.	Wier, Mrs. Jos.	5.00	
Renee Dress Shop	Wier, Mrs. Jos.	20.00	
Schardein, F. S. & Sons	Wier, Mrs. Jos.	11.25	11.25
Sherwin Williams	Wier, Mrs. Jos.	11.25	11.25
Southern Optical	Wier, Mrs. Jos.	20.00	19.60
Spalding Laundry	Wier, Mrs. Jos.	11.25	11.03
Stoll Oil Refinery	Emrich, Mrs. W. H.	20.00	
Tafel, Theo., Surgical Supplies	Hendon, Mrs. Geo. A.	20.00	20.00
Times-Journal Printing Co.	Emrich, Mrs. W. H.	35.00	26.25
Wheatley Mayonnaise	Wier, Mrs. Jos.	35.00	35.00

Clock Bread and French Brand Coffee

HANDLED EXCLUSIVELY BY ALL

KROGER-PIGGLY WIGGLY STORES

THE KROGER GROCERY AND BAKING CO.

**ANNUAL REPORT OF THE BUSINESS
MANAGER OF THE WOMAN'S AUXILIARY
SECTION TO THE KENTUCKY
MEDICAL JOURNAL**

September 11, 1939

Perhaps the most outstanding feature of the Business Manager's Report for 1939 is the increased number of advertisements. We have carried 67 Ads (April) at one time during this year, which is indeed a forward stretch toward the financial success necessary to the maintenance and continuity of our publication. So it would seem that after eight years of effort we have at last "arrived."

Here we recognize the excellent work of our Advertising manager, Mrs. Jos. E. Wier who has assured us she will continue in her quest of more advertisements throughout the coming year. At this time she has procured six signed contracts for 1940, one of which has been paid in full.

The Quarterly has been published through eight successive years without interruption

emerging through difficulties and obstacles and with occasional instances of operating by remote control, the responsibility of editing each issue resting on Mrs. A. T. McCormack.

During the past year, 686 copies, in addition to the copies sent with the Journal to every member of the Kentucky State Medical Association, have been mailed to Auxiliary members and friends. If some have failed to receive their copies, it is probable that they failed to send me their names and addresses. If the Secretaries of County Auxiliaries will send me the names and addresses of those Members who do not receive the Quarterly through their husband, son, father or brother, I shall gladly forward Quarterly copies to them. We try to supply every Auxiliary Member with the Quarterly regularly.

This year we have received \$21.45 in donations. Each donation helps.

A detail of Advertisements and Donations will be found in the present October number of the Quarterly, also the Audited Annual Report, in full. Briefly, I shall summarize this report:

Statement of Cash Receipts and Disbursements
RECEIPTS

	Receipts
August 1938	\$ 39.75
September 1938	74.04
October 1938	8.75
November 1938	88.06
December 1938	65.12
January 1939	241.30
February 1939	258.45
March 1939	79.30
April 1939	20.00
May 1939	316.75
June 1939	20.00
July 1939	46.25 *
Total Receipts	\$1257.77

* July checks deposited after books given to auditor.

Subsequent Report

Checks received and deposited since Audit July 5, 1939

Times Journal	\$ 8.75
Commission on Ad in Ky. State Medical Journal..	13.95
Stoll Oil Refinery	20.00
Bitterman Ice Cream.....	35.00
Hampton Crackers on 1940 Account.....	34.30

Total

\$112.03

Total Receipts

1369.80

Disbursements

October 7, 1938 Check No. 30—Times-Journal, October Issue	\$242.06
December 21—Check No. 31—Mrs. Jos. E. Wier, Commission on advertisements.....	25.00
December Bank Tax.....	.50
January 23 — Check No. 32—Times Journal, January Issue	278.81
February 11, 1939—Check No. 33, Bush-Krebs.....	9.85
April 15, 1939 — Check No. 34—Times-Journal, April Issue	258.72
April 15, 1939—Check No. 35—Bush-Krebs.....	5.27
May 30, 1939—Check No 36—Mrs. Jos. E. Wier, Commission on advertisements.....	126.58
July 5, 1939—Check No. 37—Postage and Express Account for 1939.....	20.42
July 17, 1939—Check No 38, Times-Journal, July Issue.....	227.36
July Bank Tax43

Total Disbursements

\$1195.00

Total Receipts for 1938-39.....\$1369.60
Total Disbursements for 1938-39..... 1195.00

Collections over cost..... 174.80
Balance in bank at beginning of 1938-39 period.. 169.56

Balance agreeing with Bank bal. of Sept. 1, 1939 \$344.36

Total received from advertisers.....	\$1163.55
Checks received from Commission on ads in the State Medical Journal for 1938-39.....	31.54
Donations to July 1, 1939.....	16.43
Total Receipts for 1938-39.....	\$1,211.52

DISBURSEMENTS

Expense of Quarterly	\$815.13
Commission paid Mrs. Jos. Wier on advertisements.....	151.58
Bank Tax	30
Total Disbursements	\$967.21
Collection over cost in 1938-39.....	244.31
Balance in Liberty Bank & Trust Co. at beginning of period	169.56
Balance in Bank July 1, 1939.....	413.87

Subsequent Deposits and Withdrawals

DEPOSITS

Check received from Commission on ads in Ky. State Medical Journal, 1939.....	13.98
Checks deposited from Advertisements.....	55.00
Total deposits Aug. 1, 1939.....	68.98
Additional checks received from Advertisements since Aug. 1, 1939.....	89.30
Total deposits Sept. 10, 1939.....	158.28
Amount on deposit.....	\$572.15
Paid to Times-Journal Pub. Co. for July Issue of Quarterly	\$227.36
Bank Tax43
	227.79
Balance in Bank Sept. 11, 1939.....	344.36
Accounts Receivable for 1939.....	181.43
Net worth	\$ 525.79

Respectfully submitted,
Mrs. (Wm. H.) Virginia E. Emrich

REPORT OF ADVERTISING MANAGER

Our Forum Bazaar, June 5, 1939, held at the Brown Hotel, Louisville, with the cooperation of the Jefferson County Auxiliary, climaxed our year's activities in the Advertising Section of the Quarterly. A description of this Bazaar may be found in the July issue on your Quarterly, p. 101. We deem it a success because we have been asked both by Members of the Auxiliary and the Advertisers to repeat the program. This we hope to do.

The number of Advertisers increased from 38 in the October 1938 Quarterly to 67 in the April, 1939 issue.

Your Advertising Manager solicits your assistance in our 1939-1940 campaign for securing these Advertisements. It is not an easy task. But if each Member would write the list of firms she thinks might be interested or benefitted in our advertising and mail to us, or better still, go with us to call on the prospective client she would do much to lighten the burden, and make the campaign a success.

Respectfully submitted,
(Mrs. Joseph E.) HILDA WIER,
Advertising Manager

ICE CREAM

A Health Food

"BUTTERMANN
Cream Ice Cream"



"HOLLENBACH
Pure Ice Cream"



BUTTERMANN
ICE CREAM COMPANY

Owned and Operated by
Louisville People

Louisville, Kentucky

Delicious cakes of many kinds,
Approved for flavor each combines—
Our baked things, palates will appease
And lagging appetites surely tease.

B & W IMORDE
GROCERS—BAKERS
Fine Food Since 1873
3rd & Ormsby Louisville, Ky.

News From The Counties

FRANKLIN

The Franklin County Auxiliary met at the home of Mrs. F. M. Travis, Frankfort, Thursday evening, April 20th, for a memorial program honoring two medical pioneers—Dr. Thomas Walker, first white man to build a house in Kentucky—and Mrs. Jane Todd Crawford, the patient upon whom Dr. Ephraim McDowell performed the first ovariectomy, the operation which led the medical profession into the vast field of abdominal surgery, bringing relief and longer life to countless numbers of people throughout the world. Mrs. R. M. Coblin gave the history of the life of Mrs. Crawford and Mrs. C. E. Youman presented a review of the life of Dr. Walker. Mrs. Eleanor Hume Offutt read her original poem, "The Old Doctor."

Mrs. John G. South presented the Auxiliary with a beautiful quilt which she and Mrs. Edwin P. Morrow had made together. Proceeds from the sale of this quilt will be used for charitable purposes.

A delightful social hour followed refreshments served by Mrs. Travis assisted by her daughters, Misses Helen and Ruby Mae Travis and by Miss Margaret Sue Flynn.

Members and guests present were Mesdames: John G. South, M. C. Darnell, R. M. Fort, R. M. Coblin, Joseph Barr, Eleanor Hume Offutt, Reba Burrow Flynn, R. D. Barton, C. E. Youmans, and Miss Lena Benton.

Mrs. John G. South entertained the Franklin County Auxiliary at her home for an all-day sewing on Thursday, May 11, when layettes and toys were made for distribution. A business meeting followed luncheon when Doctors Coblin, Martin and Travis, a special Committee appointed from the Franklin County Medical Society, consulted and advised with the Auxiliary Members regarding their program of local charitable work. Mrs. S. C. McCoy and Mrs. A. T. McCormack, from Louisville, were honor guests.

Election of Officers for the coming year formed an important part of the program of the meeting of the Franklin County Auxiliary

Friday afternoon, August 25th, at the home of Mrs. John G. South. Mrs. Joseph Barr was re-elected President. The Directory on page 141 will give the full roster, including the Committee Chairmen.

Mrs. M. E. Hoge has returned to Jackson after visiting her son, Dr. J. W. Hoge and Mrs. Hoge in Frankfort.

Dr. and Mrs. George W. Redding, of La-Grange, announce the birth of a daughter, Lucy Pat, on August 24th, at the Baptist Hospital in Louisville. Mrs. Redding was formerly Carolyn Rogers of Frankfort.

The Women of the Auxiliary of the Franklin County Medical Society have reason to feel a distinct pride in its representation at the Annual Convention of the Kentucky State Medical Association in Bowling Green, September 11-15; particularly in their President, Mrs. Joseph Barr, (recently re-elected) and the honor and recognition conferred upon her in having been elected Fourth Vice President of the State Auxiliary staff; in their very attractive display of handmade dolls, layettes, and scrapbooks; and in having won second place from the State-at-large in points of achievement over an eight months' period, Hardin County forging ahead with a 43-point majority.

Franklin County has reason to feel further honored in the election of another of its valued members upon the State staff, Mrs. John G. South, as Parliamentarian.

Already, Mrs. Eleanor Hume Offutt has served upon the State Auxiliary's Legislative Committee, and was honored in having again been elected as chairman of this committee.

The four women who represented the Franklin County Auxiliary at Bowling Green: Mrs. Joseph Barr, Mrs. John G. South, Mrs. Eleanor Hume Offutt, and Mrs. Reba Burrow Flynn, feel it a privilege to have met in such good fellowship with the ladies throughout Kentucky; to have shared with the Doctors in their enjoyment of the addresses of such outstanding men of the profession as Dr. Roger Irving Lee, of Boston; Dr. Louis Hamman of John Hopkins Hospital at Baltimore; and their own Dr. Irvin Abell, of Louisville. In returning to their homes, they feel truly inspired to greater achievements throughout the new year that lies before them.

The warm hospitality of the women of Bowling Green is something not soon to be forgotten. How unfortunate if, in the near future, the Franklin County women should not be privileged to return in some measure the very cordial and generous hospitality extended to them.

PAINT
HEADQUARTERS
THE SHERWIN-WILLIAMS CO

315 West Jefferson Street, Louisville

DISTRIBUTORS

IMPERIAL Washable WALLPAPERS

GRAVES

The Graves County Medical Auxiliary met with Mrs. Jacob Merit Mayes in the Lowes Apartment, Mayfield, August 15th, 11 Members and one guest present, for the regular meeting and the election of Officers for the coming year. (See Directory, page 141) Delegates were appointed for the State Annual Meeting in Bowling Green. Appreciation was expressed for the outstanding work of one of the Graves County Members, Mrs. H. V. Usher, the present State President, with the following lines in welcoming her back to more concentration in County Auxiliary work:

"The New Year smiles a winsome smile,
And waves a hand in greeting,
And with a thrill of joy, I know
It is a friend I'm meeting."

The Graves County Auxiliary is sending to the State Historian, Mrs. V. A. Stilley, the biography of Dr. Cave Johnston Stokes who came to Graves County in 1847, given by Laura Stokes Skinner and the biography of Dr. William Bernard Stokes, given by the Stokes children.

Mrs. N. M. Atkins, wife of the Graves County Health Officer, and Mrs. Roy Maddox (Ruth Stokes) are new members of the Graves County Auxiliary.

Mrs. Vera Ganing and grand-daughter, Miss Doris Dulaney of Rulville, Mississippi, are visiting Mrs. Laura Stokes Skinner.

Beautiful in simplicity was the twilight wedding ceremony of Miss Betty Brown, daughter of Dr. and Mrs. C. E. Brown, to Dr. Ernest Johnson at the First Christian Church, Mayfield, August 13th.

Miss Jincy Hunt, daughter of Dr. and Mrs. H. H. Hunt, once President of the Graves County Auxiliary but for the past four years living in New York, has resigned her position with Haskins and Sells, Certified Accountants, and returned to Mayfield, where all are glad to have her at home, again.

HARDIN COUNTY

Mrs. Leslie P. Herd, our new President, with her children, spent the summer in Cleveland with her mother, Mrs. Frank Shephard. Her father, Mr. Frank Shephard died suddenly last June.

Mrs. George Bradley spent three weeks at the Baptist Hospital, Louisville, during June and July.

Mrs. Wm. Barnard and son, Billy, were at Norton Infirmary, Louisville, in July.

Mrs. Walter Scott has moved to Danville to live.

JEFFERSON

The regular quarterly Luncheon and Business Meeting of The Woman's Auxiliary to the Jefferson County Medical Society was held Tuesday September 5, 1939 at the Brown Hotel, with 42 members present. The study class was held in conjunction with this meeting.

Mrs. Octavus Dulaney, Chairman of the Study Group, introduced as her speaker on the Study Class Program, Dr. A. E. Leggett, who spoke on Some Symptoms of Eye Strain in Children.

Mrs. R. T. Hudson, Program Committee Chairman, introduced Mrs. Emmet Horine as guest speaker of the day. Mrs. Horine chose as her subject, "Women in Democracy."

The Business Meeting followed and the Annual election of Officers took place. The following members were elected for the ensuing year:

President-Elect—Mrs. Bernard Asman.
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MADISON

About \$80.00 was collected for Cancer Control work by the local unit of the Woman's Field Army, Mrs. Harry Blanton, Chairman, assisted by Mrs. R. M. Phelps, Mrs. J. B. Floyd and Mrs. J. H. Rutledge. Literature, posters and mite boxes were distributed by the Committee. Several talks were made before different groups, clubs and schools. Mrs. E. H. Heller, Louisville, State Commander, addressed a public meeting at which representatives of the various clubs were present.

MARSHALL

Miss Mildred Kincade, Marshall County Public Health Nurse and one of our new members, recently announced her marriage to Mr. Gayle Stinson of Sharpe.

On the evening of July 20 the Woman's Auxiliary together with the Marshall County Medical Society enjoyed a banquet dinner at the home of Dr. and Mrs. V. A. Stilley. Ham and chicken together with all the other accessories were served.

The doctors entertained the Auxiliary by allowing the wives to lend an ear to their interesting program.

Nineteen were present and all shared in the expressed opinion that the evening had been well spent.

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As our memory goes back over the path we have trod for eight years, we are glad about many things.

We are glad that we could serve our Quarterly readers without a single interruption through these years of uncertainty and difficulty.

We are glad if we have helped Auxiliary members to a better understanding of the aims and purposes of our State Auxiliary or have helped in their own County Auxiliaries.

We are glad that our Auxiliary members are manifesting a growing interest in the Quarterly. This manifestation is most encouraging to our Advertisers. Recently one gentleman remarked that he was glad to know our Auxiliary women and glad to answer inquiries about his products. An Advertiser is entitled to some assurance of the value of his Advertisement; it is for Auxiliary members to give these men and women this assurance.

As the season changes, some of us will need fresh supplies and new goods or possibly some service sold by our Advertisers. Please turn then to the Ads in your Quarterly, make them your shopping guide; then when the time comes for Ad renewals, all of our Advertisers will be glad to sign on the dotted line.

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CHRISTMAS SEALS



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WHEN IGNORANCE IS NOT BLISS

We have heard a great deal of late about "Security." This much overworked expression has not been applied to freedom from disease. Freedom from disease involves a rather tedious process of knowing and doing, before we can hope to approach security in this regard.

We know Tuberculosis is the leading cause of death in the active period of life and that it takes approximately 2,000 from us annually. We know that it is caused by a germ which passes from the sick to the well. We know that it is preventable, controllable and curable, when found early and properly treated, but we do not realize that only one person out of every three in the educated group is intelligently informed concerning Tuberculosis. Recent surveys have shown that about one person out of ten in the group living on the lower economic level has a reasonable knowledge of this tragic disease and yet, there is approximately ten times as much Tuberculosis in that group as is found in the higher group.

The writer recently encountered a fine group of educated women who were afraid to visit a patient in one of our best sanatoria because they thought they would be infected if they went near her bed. They were willing to send flowers, write postals, etc., but not to visit. These same women

are frequent visitors to shows, crowded stores, churches, clubs and various places of amusement, but they are not afraid there.

There is a universal complaint all over the nation that more than half those entering sanatoria for the treatment of Tuberculosis are "far advanced" when they enter. This means that many of them have been spreading tubercle germs for years as they circulated among the masses with their unrecognized load of infectious material. It has been estimated that approximately 45,000 active cases of unrecognizable Tuberculosis pass through the general hospitals of our nation annually, yet many intelligent people are afraid of the educated tuberculosis patient.

Recently a young man came to the K. T. A. for advice and assistance. He had been a food and drink handler in a public place for years. Prior to that, he was working in intimate contact with young people as a director of athletics. He was thin, weak and coughing when he applied for help. Examination showed far advanced bilateral Pulmonary Tuberculosis, with cavitation. He was spreading Tuberculosis everywhere and his associates had not given this a thought until he grew too weak to continue at his work. No one had been afraid of him.

A careful history of this unfortunate young man revealed that he had known for more than six years that he was a victim of Tuberculosis. He had a record of hemorrhages more than six years previous to his examination, and yet he continued to work and spread disease. He said he knew if he had taken an examination he would have lost his job, and he did not want any one to know his condition. So, he continued working and endangering the lives of others through these years of illness. He has completely wrecked his own life, and only time will tell what he has done to others along the way.

Surely ignorance was not bliss in this instance. There are many more like it. The people must know and realize the facts until all, (not one out of ten) will take an intelligent attitude toward Tuberculosis. We must see that this is done. Let us dedicate ourselves anew to this task. Let us join the splendid program of education carried on by our State and local Health agencies, cooperating with the Kentucky Tuberculosis Asso-

(Continued on Page 139)

JANE TODD CRAWFORD MEMORIAL

ANNUAL REPORT OF THE JANE TODD CRAWFORD MEMORIAL COMMITTEE

Outstanding in the work of the Jane Todd Crawford Memorial Committee this past year is, perhaps, the completion and payment of the One Thousand Dollar Pledge to the Southern Medical Auxiliary for the joint Memorial of the States composing the Southern Medical Auxiliary. Kentucky Members, in recognition of the honor conferred upon the State by the election of one of its members as President, Mrs. Luther Bach, eagerly desired that the pledge be paid before Mrs. Bach relinquished her office. But, at the time of our Annual Meeting, October 3-6, 1938, the sum was incomplete, being but \$774.13. The last \$225.87 was difficult to raise but was realized through personal solicitation by the Chairman.

The total sum, \$1,000.00, was paid, by check, to the Treasurer of the Southern Medical Auxiliary, Mrs. K. W. Cosgrove, the presentation being made by our President, Mrs. Harlan V. Usher, in a well-worded speech at the Annual meeting of the Southern Medical Auxiliary, held in the Skirvin Hotel, Oklahoma City, November 16, 1938.

Jane Todd Crawford Day, December 13th, was observed more widely in 1938. Radio programs were featured over several Radio Stations. WAVE, Louisville, repeated the dramatization written and presented last year over that station by Mrs. Samuel H. Flowers, our State Radio Chairman. This year WAVE provided the entire cast and managed the whole program, marking the beginning, perhaps, of a general interest in Jane Todd Crawford outside the medical profession. Also, in Cincinnati, over WSAI, an educational radio program, presented Mrs. Flowers' dramatization with her permission for a few adaptations. In Salt Lake City, Utah, this dramatization was presented over KLS, the characters being taken by physicians and Members of the Auxiliary.

Several County Auxiliaries in Kentucky observed Jane Todd Crawford Day with various types of programs. Noteworthy, was the organization of a new County Auxiliary—Lawrence—on that day—a happy omen!

The Jane Todd Crawford Library in Greensburg benefitted from the collection of books and magazines in Jefferson and other Counties. This library has developed into a very real community asset. WPA changes

during the past year, though, have been a bit upsetting to the steadily progressing growth and usefulness of this project. However, these difficulties will shortly become adjusted, we hope. Books and magazines are still needed and all Auxiliary contributions will be warmly welcomed. Any book suitable for public library circulation, particularly children's books, are eagerly sought.

Highway beautification on the Jane Todd Crawford Trail has made a little progress this year. 60 Miles is a long stretch to plant. It will take at least 5 years of consecutive constructive work to make much of a demonstration on the highway—just as it does in a garden at home. The program calls for work, a lot of actual work accompanied by faith and hope.

At a luncheon held at the Pendennis Club October 12th, given by the Chairman, a review of the 1938 planting was given by the County Chairmen and representatives of the work in Green, Taylor and Marion Counties and by letters and observations from Boyle County. A report of this work was published in the April issue of the Quarterly.

Several bushels of choice iris were shipped to Campbellsville last October by Dr. W. O. Asbury, Campbellsburg. This was planted under the guidance of Mrs. Geo. Barbee and Mrs. H. E. Edwards.

Spring activities, this year, included, besides the distribution of flower seeds — of which we are happy to announce we had a generous lot from Auxiliary Members and other friends—the planting of a lot of narcissus bulbs by the high school pupils in Greensburg who, under the direction of Mrs. R. L. Durham, rescued the bulbs from a field being plowed up for tobacco cultivation.

Two filling stations in Green County—Thompson's, across the road from the entrance to the Jane Todd Crawford Farm, and the one about a mile beyond towards Greensburg owned by Mr. Squires, and known as the Jane Todd Crawford Store and Filling Station—have started beautifying developments to make their surroundings more attractive.

About a dozen lilac bushes were planted along the fence in front of the Jane Todd Crawford farm as the beginning of a lilac hedge there.

Mrs. Conrad Strong, of Alexandria, Va., donated about 400 althea bushes and 125 plants—oriental poppies and sunflowers—all of which were planted at the small demon-

stration plot near Hardin's Creek, Lebanon, and by the neighbors on the road to Campbellsville. The altheas lived and promise much beauty for the future but the plants did not survive, probably due to the long trip from Virginia.

Mrs. Jacob Lips, Louisville, Chairman of the Garden Committee of the Woman's City Club, secured a generous donation of iris from Mrs. J. E. Payton and very nice collection of shrubs and plants from Mrs. George Knauer including cedum, iris, forsythia, Japanese barberry, lilacs, spirea and syringa, all of which was distributed in Marion and Green Counties.

The first co-operation from Highway Maintenance Crews came from Mr. Ivy M. Scott and his men in Marion County on May 1 and 2, when they plowed and planted the plot near Hardin's Creek which used to be a dump, but overgrown with wild carrot in recent years. They also did some work on the other side of the road—cleaning the fence rows, digging up poison ivy and clearing out trash, old bottles, etc. Much work remains to be done at this place to make it a real garden. This year's work shows an improvement over the results of last year's feeble beginning by a few zealous Members of the Jefferson County Auxiliary who at the suggestion of Mrs. W. E. Coleman, Lebanon, endeavored to make a demonstration garden here and rid the place of the vigorous growth of wild carrot, poisonous to cattle.

A new development was begun at Newmarket, in front of the home of Mr. John Buckman, a member of the highway maintenance crew who generously offered to care for it. A few shrubs—forsythia, barberry and syringa along with some zinnia plants were placed here.

At the Jessietown School, 10 shrubs—spirea Van Houtti—the contribution of Mrs. Alfred D. Teare, Berlin, N. H.—were planted up against the foundation wall and will make a distinct improvement to the appearance of this schoolhouse, set high on a hill above the road. The spirea bushes all blossomed this, their first season.

Reports that many plants had been taken last year by passing motorists and others is discouraging. But, as one woman said, "They must have admired the flowers or they would not have taken them!" Because of this disturbance to the plantings, the State Highway Department has kindly placed four signs—Planted—Do Not Disturb—at the plot near Hardin's Creek. Their efficacy is yet to be proven. But—we hope.

More plants, shrubs, trees, bulbs and seeds are wanted for immediate fall planting. And

—for next spring's planting. Your contributions will be gratefully received.

Another dream came true on May 20th, when in Danville the old home of Dr. Ephraim McDowell, restored by the W. P. A., was dedicated as the Ephraim McDowell-Jane Todd Crawford Memorial. A full account of this memorable occasion will be found in the November issue of the Kentucky Medical Journal. The Minutes of the first official meeting held in the Jane Todd Crawford Room will be found on page 100 in the July issue of the Quarterly.

One constructive thing that Auxiliary Members may do—all of them—is to help vanquish that discredited story about the mob which invariably creeps into the presentation of the Jane Todd Crawford story by uninformed persons. No proof of that mob story has ever yet been found. Not until bona fide proof of that appears can those who have done actual research on this vital historic epic accept the mob story. Your continuing interest and active support of the Jane Todd Crawford Memorial is earnestly requested.

Respectfully Submitted,

(Mrs. A. T.) Jane Teare McCormack,

Chairman

WHEN IGNORANCE IS NOT BLISS

(Continued from page 137)

ciation. Splendid literature may be had by writing the Kentucky Tuberculosis Association, 620 South Third Street, Louisville. It is all free for the asking. Why not begin to use it now?

We should all be ready to lend a hand with the educational program put on in December through the Christmas Seal Sale. This will give us a wonderful opportunity to do our part. It will spread knowledge and create interest. It will also help the Kentucky Tuberculosis Association raise funds for another year's splendid service in this great cause. Are you ready to do your part for your community and your own loved ones? Then see that the people in your community get behind this splendid work, and make this the best year in the fight against our great enemy. Let us banish fear, and spread the truth. It is the truth that will make us free.

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